=> d ibib ab hitstr 1-14

L4 ANSWER 1 OF 14 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2002:293477 CAPLUS
DOCUMENT NUMBER: 136:304056
TITLE: Hedgehog antagonists, methods and uses related thereto
INVENTOR(S): Dudek, Henryk; Pepicelli, Carmen; Karavanov, Irina
PATENT ASSIGNEE(S): Curis, Inc., USA
SOURCE: PCT Int. Appl., 224 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002030462	A2	20020418	WO 2001-US32100	20011015

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

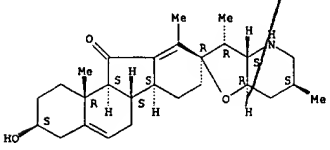
PRIORITY APPLN. INFO.: US 2000-240564P P 20001013

AB The present application is directed to compns. and methods for inhibiting angiogenesis and treating or preventing unwanted cell proliferation, including tumors, by inhibiting the hedgehog pathway, e.g., with an antagonist of the hedgehog pathway such as those disclosed herein. In one embodiment, the subject methods may be used to inhibit unwanted cell proliferation by detg. whether cells overexpress a gli gene, and contacting cells that overexpress gli gene with an effective amt. of a hedgehog antagonist. In preferred embodiments ,the unwanted cell proliferation is cancer or benign prostatic hyperplasia. Another aspect of the present invention involves measuring the levels of gli gene expression in order detn. the likelihood that a cancer will develop or to detn. a cancer treatment protocol. Another embodiment of the invention involves methods for using hedgehog antagonists to stimulate surfactant prodn. or lamellated body formation in lung cells, esp. the lung cells of premature infants. In other preferred embodiments, hedgehog antagonists are selected from small mols., hedgehog antibodies, antisense nucleic acids and ribozymes.

IT **469-59-0**, Jervine **4449-51-8**, Cyclopamine
RL: PAC (Pharmacological activity); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(hedgehog pathway antagonists for inhibition of unwanted cell proliferation in cells overexpressing gli gene or to stimulate surfactant prodn. in lung for treatment of premature infants)

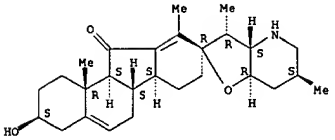
RN 469-59-0 CAPLUS
CN Spiro[9H-benzo[a]fluorene-9,2'(3'H)-furo[3,2-b]pyridin]-11(1H)-one, 2,3,3'a,4,4',5',6,6',6a,6b,7,7',7'a,8,11a,11b-hexadecahydro-3-hydroxy-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.



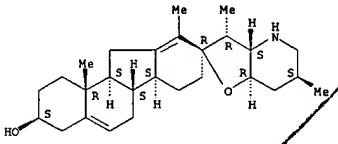
RN 4449-51-8 CAPLUS

L4 ANSWER 1 OF 14 CAPLUS COPYRIGHT 2002 ACS (Continued)



RN 4449-51-8 CAPLUS
CN Spiro[9H-benzo[a]fluorene-9,2'(3'H)-furo[3,2-b]pyridin]-3-ol, 1,2,3,3'a,4,4',5',6,6',6a,6b,7,7',7'a,8,11,11a,11b-octadecahydro-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.



L4 ANSWER 2 OF 14 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2001:507523 CAPLUS
DOCUMENT NUMBER: 135:87198
TITLE: Use of steroidal alkaloids to reverse multidrug resistance
INVENTOR(S): Liscovitch, Mordechai; Lavie, Yaakov
PATENT ASSIGNEE(S): Yeda Research and Development Co. Ltd., Israel
SOURCE: PCT Int. Appl., 31 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001049279	A2	20010712	WO 2000-IL866	20001228

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: IL 1999-133809 A 19991230

AB The invention provides steroidal alkaloids for inhibiting or reversing multidrug resistance in cancer or in bacterial, fungal or parasitic infections. The steroidal alkaloid may be administered to the patient alone or in combination with an anticancer, antibacterial, antifungal or antiparasitic agent. Examples of steroidal alkaloids include members of the solanidane or spirosolane families (e.g. tomatidine), and C-nor-D-homo steroids, e.g. of the jervane or veratramine families.

IT **469-59-0**, Jervine **4449-51-8**, Cyclopamine, **14788-78-4** **212968-58-6**, Verapatuline **347842-64-2**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(steroidal alkaloids for reversal of multidrug resistance)

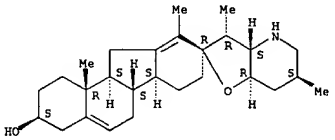
RN 469-59-0 CAPLUS
CN Spiro[9H-benzo[a]fluorene-9,2'(3'H)-furo[3,2-b]pyridin]-11(1H)-one, 2,3,3'a,4,4',5',6,6',6a,6b,7,7',7'a,8,11a,11b-hexadecahydro-3-hydroxy-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 4449-51-8 CAPLUS

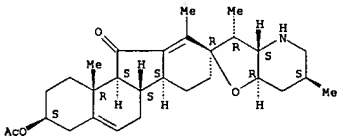
L4 ANSWER 2 OF 14 CAPLUS COPYRIGHT 2002 ACS (Continued)
CN Spiro[9H-benzo[a]fluorene-9,2'(3'H)-furo[3,2-b]pyridin]-3-ol, 1,2,3,3'a,4,4',5',6,6',6a,6b,7,7',7'a,8,11,11a,11b-octadecahydro-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.



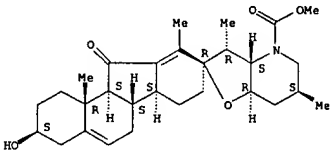
RN 14788-78-4 CAPLUS
CN Spiro[9H-benzo[a]fluorene-9,2'(3'H)-furo[3,2-b]pyridin]-11(2H)-one, 3-(acetyloxy)-1,3,3'a,4,4',5',6,6',6a,6b,7,7',7'a,8,11a,11b-hexadecahydro-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.



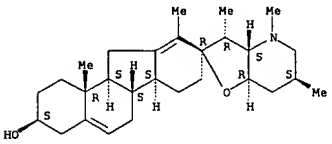
RN 212968-58-6 CAPLUS
CN Spiro[9H-benzo[a]fluorene-9,2'(3'H)-furo[3,2-b]pyridine]-4'(3'aH)-carboxylic acid, 1,2,3,4,5',6,6',6a,6b,7,7',7'a,8,11,11a,11b-hexadecahydro-3-hydroxy-3',6',10,11b-tetramethyl-11-oxo-, methyl ester, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



L4 ANSWER 2 OF 14 CAPLUS COPYRIGHT 2002 ACS (Continued)
RN 347842-64-2 CAPLUS
CN Spiro[9H-benzo[a]fluorene-9,2'(3'H)-furo[3,2-b]pyridin]-3-ol, 1,2,3,3'a,4,4',5',6,6',6a,6b,7,7',7'a,8,11,11a,11b-octadecahydro-3',4',6',10,11b-pentamethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)-(9CI) (CA INDEX NAME)

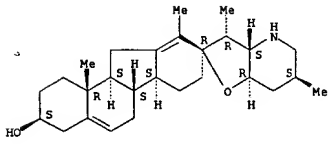
Absolute stereochemistry.



L4 ANSWER 3 OF 14 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2001:447066 CAPLUS
DOCUMENT NUMBER: 136:210143
TITLE: Inhibitory effect of steroidal alkaloids on drug transport and multidrug resistance in human cancer cells
AUTHOR(S): Lavie, Yaakov; Harel-Orbital, Tovi; Gaffield, William; Liscovitch, Mordechai
CORPORATE SOURCE: Department of Biological Regulation, Weizmann Institute of Science, Rehovot, 76100, Israel
SOURCE: Anticancer Research (2001), 21(2A), 1189-1194
CODEN: ANTRD4; ISSN: 0250-7005
PUBLISHER: International Institute of Anticancer Research
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Intrinsic or acquired resistance of tumor cells to multiple cytotoxic drugs (multidrug resistance. MDR) is a major cause of failure of cancer chemotherapy. MDR is often caused by elevated expression of drug transporters such as P-glycoprotein (P-gp) or multidrug resistance protein (MRP). A no. of compds., termed chemosensitizers, have little or no cytotoxic action of their own, but inhibit (P-gp)- or MRP-mediated drug export and are capable of sensitizing MDR cells to the cytotoxic effects of chemotherapeutic drugs. Here the authors examd. the ability of steroidal alkaloids of plant origin, namely the Veratrum sp. alkaloid cyclopamine and the Lycopersicon sp. alkaloid tomatidine, to act as potent and effective chemosensitizers in multidrug resistant tumor cells. Drug uptake was detd. by measuring accumulation of tetramethylrosamine in multidrug resistant NCl AdrR human adenocarcinoma cells. Resistance to adriamycin and vinblastine was detd. by utilizing the MTT cell survival assay. Cyclopamine and tomatidine elevate tetramethylrosamine uptake by NCl AdrR cells and sensitize the cells to the cytotoxic action of adriamycin and vinblastine. In both cases these agents are comparable in patency and efficacy to verapamil, a reversal agent commonly used in MDR research. It is concluded that steroidal alkaloids of plant origin act as inhibitors of P-gp-mediated drug transport and multidrug resistance and therefore may serve as chemosensitizers in combination chemotherapy with conventional cytotoxic drugs for treating multidrug resistant cancer.
IT **4449-51-8**, Cyclopamine
RL: PAC (Pharmacological activity); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(inhibitory effect of steroidal alkaloids on drug transport and multidrug resistance in human cancer cells)
RN 4449-51-8 CAPLUS
CN Spiro[9H-benzo[a]fluorene-9,2'(3'H)-furo[3,2-b]pyridin]-3-ol, 1,2,3,3'a,4,4',5',6,6',6a,6b,7,7',7'a,8,11,11a,11b-octadecahydro-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.

L4 ANSWER 3 OF 14 CAPLUS COPYRIGHT 2002 ACS (Continued)



REFERENCE COUNT: 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

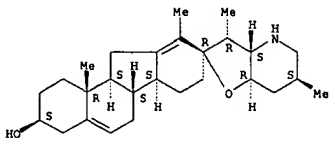
L4 ANSWER 4 OF 14 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2001:434884 CAPLUS
DOCUMENT NUMBER: 135:41031
TITLE: Methods using hedgehog protein or hedgehog protein-encoding nucleic acid to stimulate insulin production by pancreatic .beta.-cells
INVENTOR(S): Habener, Joel F.; Thomas, Melissa K.
PATENT ASSIGNEE(S): The General Hospital Corporation, USA
SOURCE: PCT Int. Appl., 63 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001041786	A1	20010614	WO 2000-US33575	20001208

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 1999-170282P P 19991210
AB The invention features a method of treating deficiency of insulin in a patient, comprising administering to a patient in need thereof hedgehog protein or nucleic acid in an amt. effective to raise the level of insulin in the patient. A method is also disclosed for suppressing insulin secretion using hedgehog protein inhibitor, e.g. cyclopamine.
IT **4449-51-8**, Cyclopamine **4449-51-8D**, Cyclopamine, derivs.
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(hedgehog protein or hedgehog protein-encoding nucleic acid to stimulate insulin prodn. by pancreatic .beta.-cells)
RN 4449-51-8 CAPLUS
CN Spiro[9H-benzo[a]fluorene-9,2'(3'H)-furo[3,2-b]pyridin]-3-ol, 1,2,3,3'a,4,4',5',6,6',6a,6b,7,7',7'a,8,11,11a,11b-octadecahydro-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)-(9CI) (CA INDEX NAME)

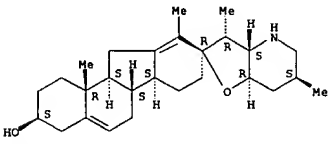
Absolute stereochemistry.



RN 4449-51-8 CAPLUS
CN Spiro[9H-benzo[a]fluorene-9,2'(3'H)-furo[3,2-b]pyridin]-3-ol,

L4 ANSWER 4 OF 14 CAPLUS COPYRIGHT 2002 ACS (Continued)
1,2,3,3'a,4,4',5',6,6',6a,6b,7,7',7'a,8,11,11a,11b-octadecahydro-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 5 OF 14 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2001:283977 CAPLUS
DOCUMENT NUMBER: 134:295995
TITLE: Synthesis, compositions and uses of steroidal alkaloids as regulators of the hedgehog pathway
INVENTOR(S): Beachy, Philip A.
PATENT ASSIGNEE(S): Johns Hopkins University School of Medicine, USA
SOURCE: PCT Int. Appl., 164 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001027135	A2	20010419	WO 2000-US28479	20001013
WO 2001027135	A3	20020510		

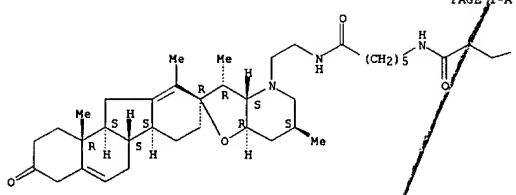
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 1999-159215P P 19991013
US 2000-229273P P 20000830
OTHER SOURCE(S): MARPAT 134:295995
AB The present invention makes available, inter alia, methods and reagents for modulating smoothened-dependent pathway activation. In certain embodiments, the subject methods can be used to counteract the phenotypic effects of unwanted activation of a hedgehog pathway, such as resulting from hedgehog gain-of-function, ptc loss-of-function or smoothened gain-of-function mutations. Synthesis of cyclopamine, jervine and cycloposine derivs. is presented.
IT **306387-90-6P 334616-24-9P 334616-28-3P**
334616-33-0P 334616-35-2P 334616-36-3P
334616-43-2P 334616-45-4P 334616-53-4P
334616-56-7P 334616-63-6P 334616-69-2P
334616-70-5P 334616-75-0P 334616-76-1P
334658-24-1P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); **THU (Therapeutic use)**; BIOL (Biological study); PREP (Preparation); USES (Uses)
(synthesis, compns. and uses of steroidal alkaloids as regulators of the hedgehog pathway)
RN 306387-90-6 CAPLUS
CN Benzenepropanamide, N-[6-[[2-[(3'R,3'aS,6'S,6aS,6bS,7'aR,2'R,11aS,11bR)-1,2,3,3'a,4,4',5',6,6',6a,6b,7,7',7'a,8,11,11a,11b-octadecahydro-3',6',10,11b-tetramethyl-3-oxospiro[9H-benzo[a]fluorene-9,2'(3'H)-furo[3,2-b]pyridin]-4'-yl]ethyl]amino]-6-oxohexyl]- (9CI) (CA INDEX NAME)

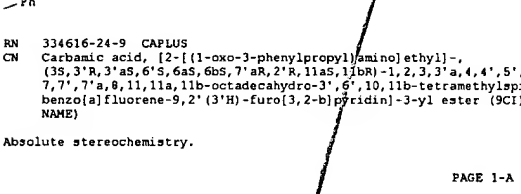
Absolute stereochemistry.

L4 ANSWER 5 OF 14 CAPLUS COPYRIGHT 2002 ACS (Continued)

PAGE 1-A



PAGE 1-B

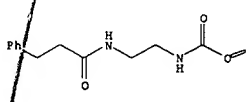


Ph

RN 334616-24-9 CAPLUS
CN Carbamic acid, [2-[(1-oxo-3-phenylpropyl)amino]ethyl]-, (3S,3'R,3'aS,6'S,6aS,6bS,7'aR,2'R,11aS,11bR)-1,2,3,3'a,4,4',5',6,6',6a,6b,7,7',7'a,8,11,11a,11b-octadecahydro-3',6',10,11b-tetramethylspiro[9H-benzo[a]fluorene-9,2'(3'H)-furo[3,2-b]pyridin]-3-yl ester (9CI) (CA INDEX NAME)

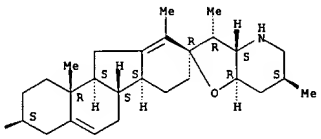
Absolute stereochemistry.

PAGE 1-A



L4 ANSWER 5 OF 14 CAPLUS COPYRIGHT 2002 ACS (Continued)

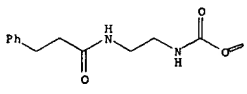
PAGE 1-B



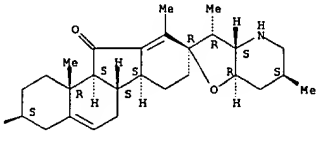
RN 334616-28-3 CAPLUS
CN Carbamic acid, [2-[(1-oxo-3-phenylpropyl)amino]ethyl]-, (3S,3'R,3'aS,6'S,6aS,6bS,7'aR,2'R,11aS,11bR)-1,2,3,3'a,4,4',5',6,6',6a,6b,7,7',7'a,8,11,11a,11b-octadecahydro-3',6',10,11b-tetramethyl-11-oxospiro[9H-benzo[a]fluorene-9,2'(3'H)-furo[3,2-b]pyridin]-3-yl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



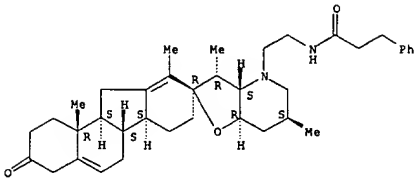
PAGE 1-B



RN 334616-33-0 CAPLUS
CN Benzenepropanamide, N-[2-[(3'R,3'aS,6'S,6aS,6bS,7'aR,2'R,11aS,11bR)-1,2,3,3',3'a,4,5',6,6',6a,6b,7,7',7'a,8,11,11a,11b-octadecahydro-3',6',10,11b-tetramethyl-3-oxospiro[9H-benzo[a]fluorene-9,2'(4'H)-furo[3,2-b]pyridin]-4'-yl]ethyl]- (9CI) (CA INDEX NAME)

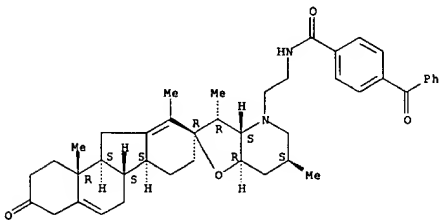
Absolute stereochemistry.

L4 ANSWER 5 OF 14 CAPLUS COPYRIGHT 2002 ACS (Continued)



RN 334616-35-2 CAPLUS
CN Benzamide, 4-benzoyl-N-[2-[(3'R,3'aS,6'S,6aS,6bS,7'aR,2'R,11aS,11bR)-1,2,3,3',3'a,4,5',6,6',6a,6b,7,7',7'a,8,11,11a,11b-octadecahydro-3',6',10,11b-tetramethyl-3-oxospiro[9H-benzo[a]fluorene-9,2'(4'H)-furo[3,2-b]pyridin]-4'-yl]ethyl]- (9CI) (CA INDEX NAME)

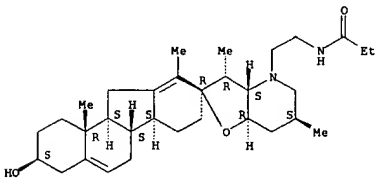
Absolute stereochemistry.



RN 334616-36-3 CAPLUS
CN Benzenepropanamide, 4-azido-3-iodo-N-[2-[(3S,3'R,3'aS,6'S,6aS,6bS,7'aR,2'R,11aS,11bR)-1,2,3,3',3'a,4,5',6,6',6a,6b,7,7',7'a,8,11,11a,11b-octadecahydro-3-hydroxy-3',6',10,11b-tetramethylspiro[9H-benzo[a]fluorene-9,2'(4'H)-furo[3,2-b]pyridin]-4'-yl]ethyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

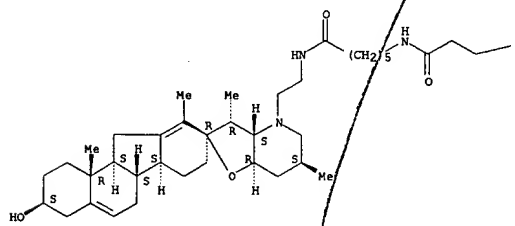
L4 ANSWER 5 OF 14 CAPLUS COPYRIGHT 2002 ACS (Continued)



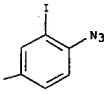
RN 334616-53-4 CAPLUS
CN Benzenepropanamide, 4-azido-3-iodo-N-[6-[[2-[(3S,3'R,3'aS,6'S,6aS,6bS,7'aR,2'R,11aS,11bR)-1,2,3,3',3'a,4,5',6,6',6a,6b,7,7',7'a,8,11,11a,11b-octadecahydro-3-hydroxy-3',6',10,11b-tetramethylspiro[9H-benzo[a]fluorene-9,2'(4'H)-furo[3,2-b]pyridin]-4'-yl]ethyl]amino]-6-oxohexyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

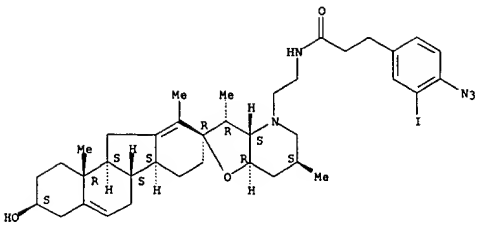
PAGE 1-A



PAGE 1-B

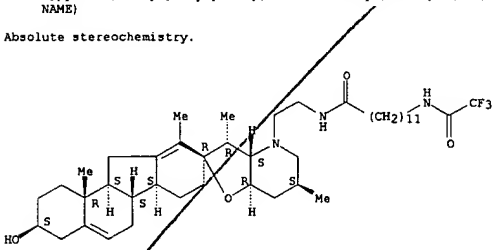


L4 ANSWER 5 OF 14 CAPLUS COPYRIGHT 2002 ACS (Continued)



RN 334616-43-2 CAPLUS
CN Dodecanamide, N-[2-[(3S,3'R,3'aS,6'S,6aS,6bS,7'aR,2'R,11aS,11bR)-1,2,3,3',3'a,4,5',6,6',6a,6b,7,7',7'a,8,11,11a,11b-octadecahydro-3-hydroxy-3',6',10,11b-tetramethylspiro[9H-benzo[a]fluorene-9,2'(4'H)-furo[3,2-b]pyridin]-4'-yl]ethyl]-12-[(trifluoroacetyl)amino]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



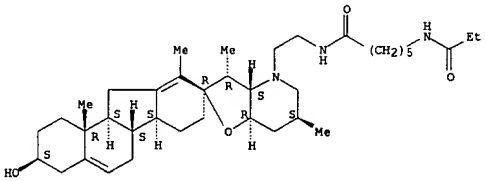
RN 334616-45-4 CAPLUS
CN Propanamide, N-[2-[(3S,3'R,3'aS,6'S,6aS,6bS,7'aR,2'R,11aS,11bR)-1,2,3,3',3'a,4,5',6,6',6a,6b,7,7',7'a,8,11,11a,11b-octadecahydro-3-hydroxy-3',6',10,11b-tetramethylspiro[9H-benzo[a]fluorene-9,2'(4'H)-furo[3,2-b]pyridin]-4'-yl]ethyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L4 ANSWER 5 OF 14 CAPLUS COPYRIGHT 2002 ACS (Continued)

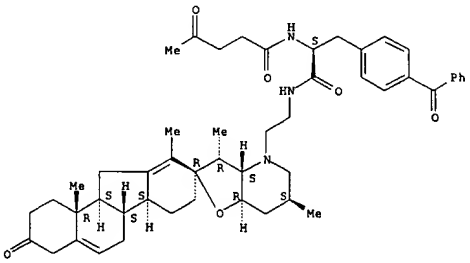
RN 334616-56-7 CAPLUS
CN Hexanamide, N-[2-[(3S,3'R,3'aS,6'S,6aS,6bS,7'aR,2'R,11aS,11bR)-1,2,3,3',3'a,4,5',6,6',6a,6b,7,7',7'a,8,11,11a,11b-octadecahydro-3-hydroxy-3',6',10,11b-tetramethylspiro[9H-benzo[a]fluorene-9,2'(4'H)-furo[3,2-b]pyridin]-4'-yl]ethyl]-6-[(1-oxopropyl)amino]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 334616-63-6 CAPLUS
CN Benzenepropanamide, 4-benzoyl-.alpha.-[(1,4-dioxopentyl)amino]-N-[2-[(3'R,3'aS,6'S,6aS,6bS,7'aR,2'R,11aS,11bR)-1,2,3,3',3'a,4,5',6,6',6a,6b,7,7',7'a,8,11,11a,11b-octadecahydro-3',6',10,11b-tetramethyl-3-oxospiro[9H-benzo[a]fluorene-9,2'(4'H)-furo[3,2-b]pyridin]-4'-yl]ethyl]-, (.alpha.S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

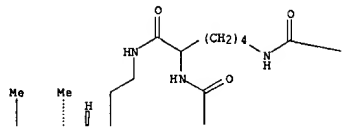


RN 334616-69-2 CAPLUS
CN Card-20(22)-enolide, 3-[2-[[6-[[5-[(4-benzoylbenzoyl)amino]-6-[[2-[(2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)-1,2,3,3',3'a,4',5',6,6',6a,6b,7,7',7'a,8,11,11a,11b-octadecahydro-3-hydroxy-3',6',10,11b-tetramethylspiro[9H-benzo[a]fluorene-9,2'(4'H)-furo[3,2-b]pyridin]-4'-yl]ethyl]amino]-6-oxohexyl]amino]-6-oxohexyl]amino]-2-oxoethoxy]-12,14-dihydroxy-, (3.beta.,5.beta.,12.beta.)- (9CI) (CA INDEX NAME)

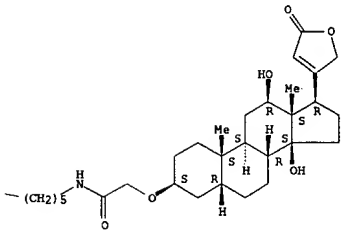
L4 ANSWER 5 OF 14 CAPLUS COPYRIGHT 2002 ACS (Continued)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

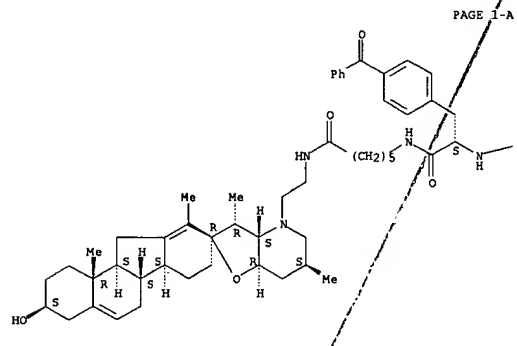


L4 ANSWER 5 OF 14 CAPLUS COPYRIGHT 2002 ACS (Continued)

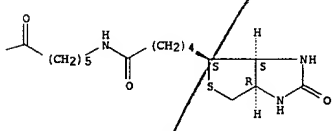
CN 1H-Thieno[3,4-d]imidazole-4-pentanamide, N-[6-[[(1S)-1-[(4-benzoylphenyl)methyl]-2-[[6-[[2-[(2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)-1,2,3,3',3'a,4,5',6,6',6a,6b,7,7',7'a,8,11,11a,11b-octadecahydro-3-hydroxy-3',6',10,11b-tetramethylspiro[9H-benzo[a]fluorene-9,2'(4'H)-furo[3,2-b]pyridin]-4'-yl]ethyl]amino]-6-oxohexyl]amino]-2-oxoethyl]amino]-6-oxohexyl]hexahydro-2-oxo-, (3aS,4S,6aR)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

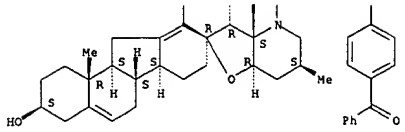


RN 334616-76-1 CAPLUS

CN Benzenepropanamide, 4-azido-3-(iodo-125I)-N-[6-[[2-[(3S,3'R,3'aS,6'S,6aS,6bS,7'aR,2'R,11aS,11bR)-1,2,3,3'a,4,4',5',6,6',6a,6b,7,7',7'a,8,11,11a,11b-octadecahydro-3-hydroxy-3',6',10,11b-tetramethylspiro[9H-benzo[a]fluorene-9,2'(3'H)-furo[3,2-b]pyridin]-4'-yl]ethyl]amino]-6-oxohexyl]- (9CI) (CA INDEX NAME)

L4 ANSWER 5 OF 14 CAPLUS COPYRIGHT 2002 ACS (Continued)

PAGE 2-A

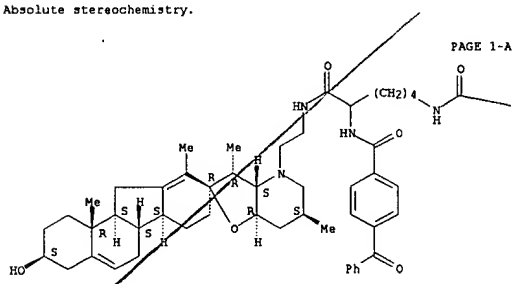


RN 334616-70-5 CAPLUS

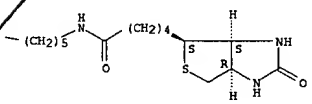
CN 1H-Thieno[3,4-d]imidazole-4-pentanamide, N-[6-[[5-[(4-benzoylbenzoyl)amino]-6-[[2-[(2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)-1,2,3,3',3'a,4,5',6,6',6a,6b,7,7',7'a,8,11,11a,11b-octadecahydro-3-hydroxy-3',6',10,11b-tetramethylspiro[9H-benzo[a]fluorene-9,2'(4'H)-furo[3,2-b]pyridin]-4'-yl]ethyl]amino]-6-oxohexyl]amino]-6-oxohexyl]hexahydro-2-oxo-, (3aS,4S,6aR)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

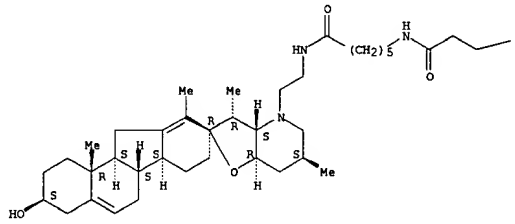


RN 334616-75-0 CAPLUS

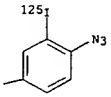
L4 ANSWER 5 OF 14 CAPLUS COPYRIGHT 2002 ACS (Continued)

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

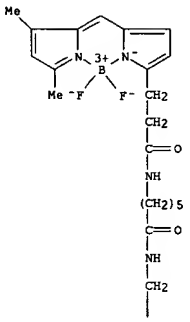


RN 334658-24-1 CAPLUS

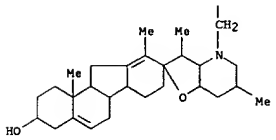
CN Boron, [5-[(3,5-dimethyl-2H-pyrrol-2-ylidene-.kappa.N)methyl]-N-[6-[[2-[(3S,3'R,3'aS,6'S,6aS,6bS,7'aR,2'R,11aS,11bR)-1,2,3,3',3'a,4,5',6,6',6a,6b,7,7',7'a,8,11,11a,11b-octadecahydro-3-hydroxy-3',6',10,11b-tetramethylspiro[9H-benzo[a]fluorene-9,2'(4'H)-furo[3,2-b]pyridin]-4'-yl]ethyl]amino]-6-oxohexyl]-1H-pyrrole-2-propanamidato-.kappa.N1]difluoro-, (T-4)- (9CI) (CA INDEX NAME)

L4 ANSWER 5 OF 14 CAPLUS COPYRIGHT 2002 ACS (Continued)

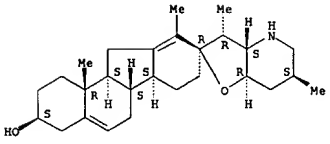
PAGE 1-A



PAGE 2-A



L4 ANSWER 6 OF 14 CAPLUS COPYRIGHT 2002 ACS (Continued)



REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 6 OF 14 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 2000:880985 CAPLUS
DOCUMENT NUMBER: 134:37058
TITLE: Therapeutic use of an inhibitor of a hedgehog or a hedgehog-related signaling pathway
INVENTOR(S): Lamb, Jonathan Robert; Hoyne, Gerard Francis; Dallman, Margaret Jane
PATENT ASSIGNEE(S): Lorantis Limited, UK
SOURCE: PCT Int. Appl., 78 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000074706	A1	20001214	WO 2000-GB2191	20000605
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
EP 1183040	A1	20020306	EP 2000-935413	20000605
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				

PRIORITY APPLN. INFO.: GB 1999-13350 A 19990608
GB 1999-21953 A 19990916
WO 2000-GB2191 W 20000605

AB Use of an inhibitor of a Hedgehog signaling pathway, or an inhibitor of a pathway which is a target of the Hedgehog signaling pathway in the prepn. of a medicament for treatment of epithelial cell hyperplasia, fibrosis of tissue, inflammation, cancer or an immune disorder. Also a transgenic animal or cell line capable of expressing a component or an inhibitor of a hedgehog signaling pathway or a target pathway of the hedgehog signaling pathway.

IT **4449-51-8**, Cyclopamine
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(therapeutic use of inhibitor of hedgehog protein or hedgehog-related signaling pathway and transgenic animal or cell line expressing component or inhibitor of these pathways)

RN 4449-51-8 CAPLUS
CN Spiro[9H-benzo[a]fluorene-9,2'(3'H)-furo[3,2-b]pyridin]-3-ol, 1,2,3,3'a,4,4',5',6,6',6a,6b,7,7',7'a,8,11,11a,11b-octadecahydro-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.

L4 ANSWER 7 OF 14 CAPLUS COPYRIGHT 2002 ACS

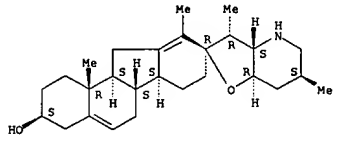
ACCESSION NUMBER: 2000:637045 CAPLUS
DOCUMENT NUMBER: 133:344307
TITLE: Effects of oncogenic mutations in Smoothened and Patched can be reversed by cyclopamine
AUTHOR(S): Taipale, Jussi; Chen, James K.; Cooper, Michael K.; Wang, Baolin; Mann, Randall K.; Milenkovic, Ljiljana; Scotts, Matthew P.; Beachy, Philip A.
CORPORATE SOURCE: Department of Molecular Biology and Genetics, The Johns Hopkins University School of Medicine, Baltimore, MD, 21205, USA
SOURCE: Nature (London) (2000), 406(6799), 1005-1009
CODEN: NATUAS; ISSN: 0028-0836
PUBLISHER: Nature Publishing Group
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Basal cell carcinoma, medulloblastoma, rhabdomyosarcoma and other human tumors are assocd. with mutations that activate the proto-oncogene Smoothened (SMO) or that inactivate the tumor suppressor Patched (PTCH). Smoothened and Patched mediate the cellular response to the Hedgehog (Hh) secreted protein signal, and oncogenic mutations affecting these proteins cause excess activity of the Hh response pathway. Here we show that the plant-derived teratogen cyclopamine, which inhibits the Hh response, is a potential 'mechanism-based' therapeutic agent for treatment of these tumors. We show that cyclopamine or synthetic derivs. with improved potency block activation of the Hh response pathway and abnormal cell growth assocd. with both types of oncogenic mutation. Our results also indicate that cyclopamine may act by influencing the balance between active and inactive forms of Smoothened.

IT **4449-51-8**, Cyclopamine **306387-90-6**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(effects of oncogenic mutations in Smoothened and Patched can be reversed by cyclopamine)

RN 4449-51-8 CAPLUS
CN Spiro[9H-benzo[a]fluorene-9,2'(3'H)-furo[3,2-b]pyridin]-3-ol, 1,2,3,3'a,4,4',5',6,6',6a,6b,7,7',7'a,8,11,11a,11b-octadecahydro-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)-(9CI) (CA INDEX NAME)

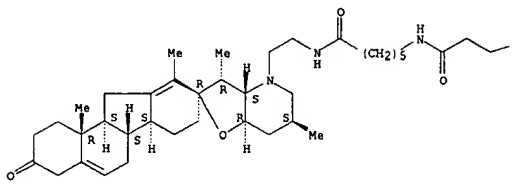
Absolute stereochemistry.



RN 306387-90-6 CAPLUS
CN Benzenepropanamide, N-[6-[[2-[(3'R,3'aS,6'S,6aS,6bS,7'aR,2'R,11aS,11bR)-1,2,3,3'a,4,4',5',6,6',6a,6b,7,7',7'a,8,11,11a,11b-octadecahydro-3',6',10,11b-tetramethyl-3-oxospiro[9H-benzo[a]fluorene-9,2'(3'H)-furo[3,2-b]pyridin]-4'-yl]ethyl]amino]-6-oxohexyl]- (9CI) (CA INDEX NAME)

L4 ANSWER 7 OF 14 CAPLUS COPYRIGHT 2002 ACS (Continued)
Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

REFERENCE COUNT: 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

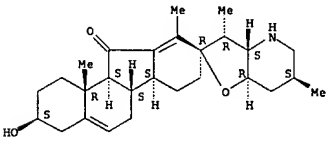
L4 ANSWER 8 OF 14 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2000:493313 CAPLUS
DOCUMENT NUMBER: 133:99549
TITLE: Regulation of the hedgehog pathway and smoothened gain-of-function by gene patched agonists
INVENTOR(S): Dudek, Henryk; Ji, Benxiu
PATENT ASSIGNEE(S): Ontogeny, Inc., USA
SOURCE: PCT Int. Appl., 114 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000041545	A2	20000720	WO 2000-US873	20000113
WO 2000041545	A3	20000928		
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 6291516	B1	20010918	US 1999-417564	19991014
EP 1143961	A2	20011017	EP 2000-906910	20000113
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
US 2001034337	A1	20011025	US 2001-867311	20010529

PRIORITY APPLN. INFO.: US 1999-115642P P 19990113
US 1999-119594P P 19990210
US 1999-142124P P 19990702
US 1999-417564 A 19991014
WO 2000-US873 W 20000113
OTHER SOURCE(S): MARPAT 133:99549
AB The present invention makes available methods and reagents for inhibiting aberrant growth states resulting from hedgehog gain-of-function, patched (ptc) loss-of-function or smoothened gain-of-function comprising contacting a cell with a compd., such as a polypeptide or small mol. in an amt. sufficient to control the aberrant growth state, e.g., to agonize a normal ptc pathway or antagonize smoothened or hedgehog activity. The present invention further makes available methods and reagents for ameliorating the consequences of hedgehog loss-of-function, ptc gain-of-function, or smoothened loss-of-function comprising contacting a cell with a compd., such as a polypeptide or small mol., in an amt. sufficient for amelioration. In certain embodiments, the subject compds., e.g., a cAMP analog, adenylate cyclase agonist, or cAMP phosphodiesterase inhibitor, regulate cAMP levels, which in turn modulates activity of the hedgehog pathway. Thus, compds. such as jervine, cyclopamine, and forskolin analogs are also effective in inhibition of medulloblastoma.
IT **469-59-0**, Jervine **4449-51-8**, Cyclopamine
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)

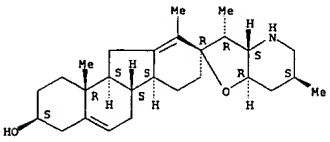
L4 ANSWER 8 OF 14 CAPLUS COPYRIGHT 2002 ACS (Continued)
(regulation of the hedgehog pathway and smoothened gain-of-function by gene patched agonists)
RN 469-59-0 CAPLUS
CN Spiro[9H-benzo[a]fluorene-9,2'(3'H)-furo[3,2-b]pyridin]-11(1H)-one, 2,3,3'a,4,4',5',6,6',6a,6b,7,7',7'a,8,11a,11b-hexadecahydro-3-hydroxy-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.



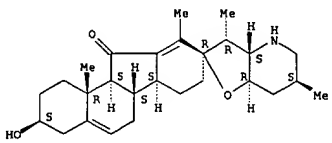
RN 4449-51-8 CAPLUS
CN Spiro[9H-benzo[a]fluorene-9,2'(3'H)-furo[3,2-b]pyridin]-3-ol, 1,2,3,3'a,4,4',5',6,6',6a,6b,7,7',7'a,8,11,11a,11b-octadecahydro-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.



L4 ANSWER 9 OF 14 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2000:38438 CAPLUS
DOCUMENT NUMBER: 132:202865
TITLE: Effects of Veratrum nigrum alkaloids on central catecholaminergic neurons of renal hypertensive rats
AUTHOR(S): Li, Hua; Gao, Guang-You; Li, Shu-Yuan
CORPORATE SOURCE: Department of Pharmacology, Dalian Medical University, Dalian, 116027, Peop. Rep. China
SOURCE: Acta Pharmacologica Sinica (2000), 21(1), 23-28
CODEN: APSCG5
PUBLISHER: Science Press
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Aim: To study the central hypotensive mechanism of Veratrum nigrum L var ussurience Nakai alkaloids (VnA) in renal hypertensive rats (RHR). Methods: The quant. method of immunocytochem. (ICC) was used to observe and detect the effect of VnA (30 .mu.g .cntdot. kg-1, iv) on activity of central catecholaminergic (CA) neurons of C1, C2, A1, and A5 areas in RHR. Results: VnA increased the immunoreactivity (IR) of tyrosine 3-monooxygenase (TM)-immunopos. (IP) neurons of C1, C2, and A5 areas in RHR exptl. group compared with RHR control group [pos. units: (1.9.+-.0.4), (1.18.+-.0.23), (1.2.+-.0.4) vs (0.15.+-.0.22), (0.31.+-.0.16), (0.69.+-.0.20), resp.]; IR of TM-IP neurons of C1 and C2 areas in RHR control group was decreased compared with sham-operated group [pos. units: (0.15.+-.0.22), (0.31.+-.0.16) vs (1.45.+-.0.29), (1.36.+-.0.25), resp.]. Conclusion: VnA increased the activity of central CA neurons in RHR to exert its hypotensive effect.
IT **469-59-0**, Jervine
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(Veratrum nigrum alkaloids effect on central catecholaminergic neurons in renal hypertension)
RN 469-59-0 CAPLUS
CN Spiro[9H-benzo[a]fluorene-9,2'(3'H)-furo[3,2-b]pyridin]-11(1H)-one, 2,3,3'a,4,4',5',6,6',6a,6b,7,7',7'a,8,11a,11b-hexadecahydro-3-hydroxy-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 10 OF 14 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1999:672583 CAPLUS
DOCUMENT NUMBER: 131:267077
TITLE: Use of steroidal alkaloid derivatives as inhibitors of hedgehog signaling pathways
INVENTOR(S): Beachy, Philip A.; Cooper, Michael K.; Porter, Jeffrey A.
PATENT ASSIGNEE(S): Johns Hopkins University School of Medicine, USA
SOURCE: PCT Int. Appl., 136 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

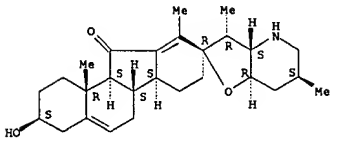
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9952534	A1	19991021	WO 1999-US7811	19990409
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 2002006931	A1	20020117	US 1998-90622	19980604
CA 2326654	AA	19991021	CA 1999-2326654	19990409
AU 9934860	A1	19991101	AU 1999-34860	19990409
EP 1067939	A1	20010117	EP 1999-916563	19990409
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 2002511415	T2	20020416	JP 2000-543144	19990409

PRIORITY APPLN. INFO.: US 1998-81186P P 19980409
US 1998-81263P P 19980409
US 1998-90622 A 19980604
WO 1999-US7811 W 19990409

OTHER SOURCE(S): MARPAT 131:267077
AB The present invention makes available assays and reagents inhibiting paracrine and/or autocrine signals produced by a hedgehog protein or aberrant activation of a hedgehog signal transduction pathway, e.g., which involve the use of a steroidal alkaloid or other small mol.
IT **469-59-0**, Jervine **4449-51-8**, Cyclopamine
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(use of steroidal alkaloid derivs. as inhibitors of hedgehog signaling pathways in relation to effect on cholesterol biosynthesis)
RN 469-59-0 CAPLUS
CN Spiro[9H-benzo[a]fluorene-9,2'(3'H)-furo[3,2-b]pyridin]-11(1H)-one, 2,3,3'a,4,4',5',6,6',6a,6b,7,7',7'a,8,11a,11b-hexadecahydro-3-hydroxy-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)-(9CI) (CA INDEX NAME)

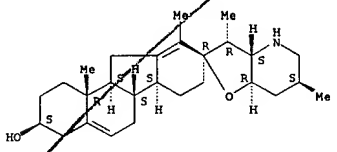
Absolute stereochemistry.

L4 ANSWER 10 OF 14 CAPLUS COPYRIGHT 2002 ACS (Continued)



RN 4449-51-8 CAPLUS
CN Spiro[9H-benzo[a]fluorene-9,2'(3'H)-furo[3,2-b]pyridin]-3-ol, 1,2,3,3'a,4,4',5',6,6',6a,6b,7,7',7'a,8,11,11a,11b-octadecahydro-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)-(9CI) (CA INDEX NAME)

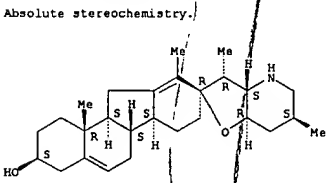
Absolute stereochemistry.



REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 11 OF 14 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1999:639750 CAPLUS
DOCUMENT NUMBER: 131:331613
TITLE: A looking glass perspective: thalidomide and cyclopamine
AUTHOR(S): Gaffield, William; Incardona, John P.; Kapur, Raj P.; Roelink, Henk
CORPORATE SOURCE: Western Regional Research Center, ARS, USDA, Albany, CA, 94710, USA
SOURCE: Cellular and Molecular Biology (Paris) (1999), 45(5), 579-588
CODEN: CMOBEF; ISSN: 0145-5680
PUBLISHER: C.M.B. Association
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
AB A review with many refs. Numerous naturally-occurring and synthetic compds. that were discovered initially because of their toxic properties, were later shown to possess biol. activities beneficial to humans that enabled them to serve as templates for the development of useful medicinal agents. A prominent example is thalidomide, a synthetic drug that gained notoriety originally due to its catastrophic teratogenicity in humans. The discovery of thalidomide's efficacy in treating several diseases has resulted in the recrudescence of the drug to society's usage. A current example of this phenomenon is the plant teratogen cyclopamine (11-deoxojervine), whose deleterious terata-inducing effects were restricted to grazing animals, but whose recently discovered inhibition of Sonic hedgehog signal transduction has provided both the potential to increase our understanding of organogenesis and to serve as a lead compd. in drug development.
IT **4449-51-8**, Cyclopamine
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(thalidomide and cyclopamine)
RN 4449-51-8 CAPLUS
CN Spiro[9H-benzo[a]fluorene-9,2'(3'H)-furo[3,2-b]pyridin]-3-ol, 1,2,3,3'a,4,4',5',6,6',6a,6b,7,7',7'a,8,11,11a,11b-octadecahydro-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)-(9CI) (CA INDEX NAME)

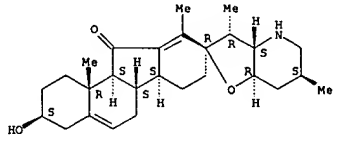
Absolute stereochemistry.



REFERENCE COUNT: 51 THERE ARE 51 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 12 OF 14 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1999:436553 CAPLUS
DOCUMENT NUMBER: 131:204460
TITLE: Steroidal alkaloids and stilbenoids from Veratrum taliense
AUTHOR(S): Zhou, Chang Xin; Tanaka, Junichi; Cheng, Christopher H. K.; Higa, Tatsuo; Tan, Ren Xiang
CORPORATE SOURCE: Institute Biotechnology, Department Biological Science Technology, Nanjing Univ., Nanjing, 210093, Peop. Rep. China
SOURCE: Planta Medica (1999), 65(5), 480-482
CODEN: PLMEAA; ISSN: 0032-0943
PUBLISHER: Georg Thieme Verlag
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Phytochem. investigation of roots and rhizomes of Veratrum taliense yielded a new and six known steroidal alkaloids as well as a new and one reported stilbene deriv. By a combination of spectral methods (IR, MS, 1H- and 13C-NMR, COSY, HMQC, HMBC, and NOESY), the structure of the new alkaloid was established as 15-angeloylgermine while the known ones were identified as 15-(2-methylbutyroyl)germine, jervine, 3-veratroylzygadenine, germine, veramiline 3-O-.beta.-D-glucopyranoside and stenophylline B-3-O-.beta.-D-glucopyranoside. The new stilbenoid, named veraphenol, was detd. to be 2-(3',5'-dihydroxyphenyl)-6-hydroxybenzofuran, and the known one was shown to be resveratrol. The in vitro enzyme assay indicated that 3-veratroylzygadenine and resveratrol are inhibitors of xanthine oxidase. The enzyme inhibitory action of resveratrol, the most active compd. found so far in V. taliense, is dose-dependent with the IC50 value at 30 .mu.M (the IC50 value of allopurinol used as a pos. control in the study is 10 mM).
IT **469-59-0**, Jervine
RL: BOC (Biological occurrence); BSU (Biological study, unclassified); **THU (Therapeutic use)**; BIOL (Biological study); OCCU (Occurrence); USES (Uses)
(steroidal alkaloids and stilbenoids from Veratrum taliense)
RN 469-59-0 CAPLUS
CN Spiro[9H-benzo[a]fluorene-9,2'(3'H)-furo[3,2-b]pyridin]-11(1H)-one, 2,3,3'a,4,4',5',6,6',6a,6b,7,7',7'a,8,11a,11b-hexadecahydro-3-hydroxy-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d ibib ab hitstr 1-9

L5 ANSWER 1 OF 9 USPATFULL

ACCESSION NUMBER: 2002:85565 USPATFULL
TITLE: Cholesterol and hedgehog signaling
INVENTOR(S): Beachy, Philip A., Baltimore, MD, UNITED STATES
Porter, Jeffrey A., Belmont, MA, UNITED STATES
Cooper, Michael K., Baltimore, MD, UNITED STATES
PATENT ASSIGNEE(S): The Johns Hopkins University School of Medicine (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002045607	A1	20020418
APPLICATION INFO.:	US 2001-954727	A1	20010911 (9)

RELATED APPLN. INFO.: Continuation of Ser. No. US 1999-250785, filed on 12 Feb 1999, PATENTED

	NUMBER	DATE
PRIORITY INFORMATION:	US 1998-74714P	19980213 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: LISA A. HAILE, Ph.D., GRAY CARY WARE & FREIDENRICH LLP, 4365 Executive Drive, Suite 1100, San Diego, CA, 92121-2133
NUMBER OF CLAIMS: 3
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 7 Drawing Page(s)
LINE COUNT: 1220
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

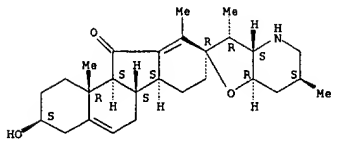
AB The present invention sterol-modified hedgehog polypeptides and functional fragments thereof. Methods of identifying compositions which affect hedgehog activity based on inhibition of cholesterol modification of hedgehog protein are described. In one aspect of the invention, the method provides a means for affecting cholesterol biosynthesis or transport in a cell comprising contacting a cell with an effective amount of a compound that affects hedgehog, thereby affecting cholesterol biosynthesis or transport. The effect may be inhibition or stimulation of cholesterol biosynthesis or transport.

IT **469-59-0**, Jervine
(cholesterol and hedgehog signaling, and modulation of cholesterol biosynthesis and transport)

RN 469-59-0 USPATFULL
CN Spiro[9H-benzo[a]fluorene-9,2'(3'H)-furo[3,2-b]pyridin]-11(1H)-one, 2,3,3'a,4,4',5',6,6',6a,6b,7,7',7'a,8,11a,11b-hexadecahydro-3-hydroxy-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.

L5 ANSWER 1 OF 9 USPATFULL (Continued)



L5 ANSWER 2 OF 9 USPATFULL

ACCESSION NUMBER: 2002:12550 USPATFULL
TITLE: INHIBITORS OF HEDGEHOG SIGNALING PATHWAYS, COMPOSITIONS AND USES RELATED THERETO
INVENTOR(S): BEACHY, PHILIP A., BALTIMORE, MD, UNITED STATES
COOPER, MICHAEL K., BALTIMORE, MD, UNITED STATES
PORTER, JEFFREY A., CAMBRIDGE, MA, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002006931	A1	20020117
APPLICATION INFO.:	US 1998-90622	A1	19980604 (9)

	NUMBER	DATE
PRIORITY INFORMATION:	US 1998-81186P	19980409 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: ROPES & GRAY, ONE INTERNATIONAL PLACE, BOSTON, MA, 02110-2624
NUMBER OF CLAIMS: 22
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 7 Drawing Page(s)
LINE COUNT: 3884
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

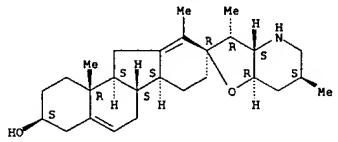
AB The present invention makes availables assays and reagents inhibiting paracrine and/or autocrine signals produced by a hedgehog protein comprising contacting a cell sensitive to the hedgehog protein with a steroidal alkaloid, or other small molecule, in a sufficient amount to reduce the sensitivity of the cell to the hedgehog protein.

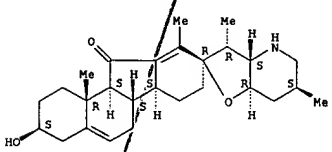
IT **469-59-0**, Jervine **4449-51-8**, Cyclopamine
(use of steroidal alkaloid derivs. as inhibitors of hedgehog signaling pathways in relation to effect on cholesterol biosynthesis)

RN 469-59-0 USPATFULL
CN Spiro[9H-benzo[a]fluorene-9,2'(3'H)-furo[3,2-b]pyridin]-11(1H)-one, 2,3,3'a,4,4',5',6,6',6a,6b,7,7',7'a,8,11a,11b-hexadecahydro-3-hydroxy-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.

L5 ANSWER 2 OF 9 USPATFULL (Continued)





RN 4449-51-8 USPATFULL
CN Spiro[9H-benzo[a]fluorene-9,2'(3'H)-furo[3,2-b]pyridin]-3-ol, 1,2,3,3'a,4,4',5',6,6',6a,6b,7,7',7'a,8,11,11a,11b-octadecahydro-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.

L5 ANSWER 3 OF 9 USPATFULL
ACCESSION NUMBER: 2001:218003 USPATFULL
TITLE: Stem cells of the islets of langerhans and their use in treating diabetes mellitus
INVENTOR(S): Habener, Joel E., Newton Center, MA, United States
Zulewski, Henryk, Geneva, Switzerland
Abraham, Elizabeth J., Quincy, MA, United States
Thomas, Melissa K., Boston, MA, United States
Vallejo, Mario, Madrid, Spain

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2001046489	A1	20011129
APPLICATION INFO.:	US 2000-731261	A1	20001206 (9)

	NUMBER	DATE
PRIORITY INFORMATION:	US 1999-169082P	19991206 (60)
	US 2000-215109P	20000628 (60)
	US 2000-238880P	20001006 (60)

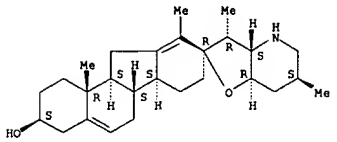
DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: Kathleen M. Williams, Ph.D, Palmer & Dodge, LLP, One Beacon Street, Boston, MA, 02108
NUMBER OF CLAIMS: 41
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 19 Drawing Page(s)
LINE COUNT: 2114
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Methods and compositions are described for the treatment of type I insulin-dependent diabetes mellitus and other conditions using newly identified stem cells that are capable of differentiation into a variety of pancreatic islet cells, including insulin-producing beta cells, as well as hepatocytes. Nestin has been identified as a molecular marker for pancreatic stem cells, while cytokeratin-19 serves as a marker for a distinct class of islet ductal cells. Methods are described whereby nestin-positive stem cells can be isolated from pancreatic islets and cultured to obtain further stem cells or pseudo-islet like structures. Methods for ex vivo differentiation of the pancreatic stem cells are disclosed. Methods are described whereby pancreatic stem cells can be isolated, expanded, and transplanted into a patient in need thereof, either allogeneically, isogeneically or xenogenically, to provide replacement for lost or damaged insulin-secreting cells or other cells.

IT **4449-51-8**, Cyclopamine
(isolation, culture, and transplantation of nestin-pos. pancreatic stem cells for diabetes treatment)
RN 4449-51-8 USPATFULL
CN Spiro[9H-benzo[a]fluorene-9,2'(3'H)-furo[3,2-b]pyridin]-3-ol, 1,2,3,3'a,4,4',5',6,6',6a,6b,7,7',7'a,8,11,11a,11b-octadecahydro-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.

L5 ANSWER 3 OF 9 USPATFULL (Continued)



L5 ANSWER 4 OF 9 USPATFULL
ACCESSION NUMBER: 2001:188704 USPATFULL
TITLE: Regulators of the hedgehog pathway, compositions and uses related thereto
INVENTOR(S): Dudek, Henryk, Wellesley, MA, United States
Ji, Benxiu, Sharon, MA, United States

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2001034337	A1	20011025
APPLICATION INFO.:	US 2001-867311	A1	20010529 (9)
RELATED APPLN. INFO.:	Continuation of Ser. No. US 1999-417564, filed on 14 Oct 1999, PENDING		

	NUMBER	DATE
PRIORITY INFORMATION:	US 1999-115642P	19990113 (60)
	US 1999-119594P	19990210 (60)
	US 1999-142124P	19990702 (60)

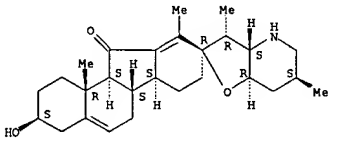
DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: ROPES & GRAY, ONE INTERNATIONAL PLACE, BOSTON, MA, 02110-2624
NUMBER OF CLAIMS: 38
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 19 Drawing Page(s)
LINE COUNT: 3831
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention makes available methods and reagents for inhibiting aberrant growth states resulting from hedgehog gain-of-function, ptc loss-of-function or smoothened gain-of-function comprising contacting a cell with a compound, such as a polypeptide or small molecule in an amount sufficient to control the aberrant growth state e.g., to agonize a normal ptc pathway or antagonize smoothened or hedgehog activity. The present invention further makes available methods and reagents for ameliorating to consequences of hedgehog loss-of-function, ptc gain-of-function, or smoothened loss-of-function comprising contacting a cell with a compound, such as a polypeptide or small molecule, in an amount sufficient to ameliorate the In certain embodiments, the subject compounds, e.g., a cAMP analog, adenylate cyclase agonist, or cAMP phosphodiesterase inhibitor, regulate cAMP levels, which in turn modulates activity of the hedgehog pathway.

IT **469-59-0**, Jervine **4449-51-8**, Cyclopamine
(regulation of the hedgehog pathway and smoothened gain-of-function by gene patched agonists)
RN 469-59-0 USPATFULL
CN Spiro[9H-benzo[a]fluorene-9,2'(3'H)-furo[3,2-b]pyridin]-11(1H)-one, 2,3,3'a,4,4',5',6,6',6a,6b,7,7',7'a,8,11a,11b-hexadecahydro-3-hydroxy-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)-(9CI) (CA INDEX NAME)

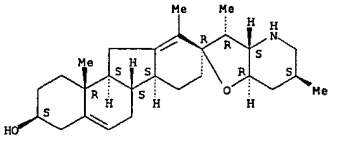
Absolute stereochemistry.

L5 ANSWER 4 OF 9 USPATFULL (Continued)



RN 4449-51-8 USPATFULL
CN Spiro[9H-benzo[a]fluorene-9,2'(3'H)-furo[3,2-b]pyridin]-3-ol, 1,2,3,3'a,4,4',5',6,6',6a,6b,7,7',7'a,8,11,11a,11b-octadecahydro-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.



L5 ANSWER 5 OF 9 USPATFULL
ACCESSION NUMBER: 2001:165614 USPATFULL
TITLE: Stem cells and their use in transplantation
INVENTOR(S): Moss, Peter Ian, London, Great Britain
Walters, David Martin, London, Great Britain
Pointer, Graham, London, Great Britain

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2001024824	A1	20010927
APPLICATION INFO.:	US 2000-731255	A1	20001206 (9)

	NUMBER	DATE
PRIORITY INFORMATION:	US 1999-169082P	19991206 (60)
	US 2000-215109P	20000628 (60)
	US 2000-238880P	20001006 (60)

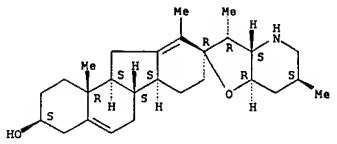
DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: Palmer & Dodge, LLP, One Beacon Street, Boston, MA, 02108
NUMBER OF CLAIMS: 127
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 18 Drawing Page(s)
LINE COUNT: 2446
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Methods and compositions are described for the treatment of type I insulin-dependent diabetes mellitus and other conditions using newly identified stem cells that are capable of differentiation into a variety of pancreatic islet cells, including insulin-producing beta cells, as well as hepatocytes. Nestin has been identified as a molecular marker for pancreatic stem cells, while cytokeratin-19 serves as a marker for a distinct class of islet ductal cells. Methods are described whereby nestin-positive stem cells can be isolated from pancreatic islets and cultured to obtain further stem cells or pseudo-islet like structures. Methods for ex vivo differentiation of the pancreatic stem cells are disclosed. Methods are described whereby pancreatic stem cells can be isolated, expanded, and transplanted into a patient in need thereof, either allogeneically, isogeneically or xenogenically, to provide replacement for lost or damaged insulin-secreting cells or other cells.

IT **4449-51-8**, Cyclopamine
(isolation, culture, and transplantation of nestin-pos. pancreatic stem cells for diabetes treatment)
RN 4449-51-8 USPATFULL
CN Spiro[9H-benzo[a]fluorene-9,2'(3'H)-furo[3,2-b]pyridin]-3-ol, 1,2,3,3'a,4,4',5',6,6',6a,6b,7,7',7'a,8,11,11a,11b-octadecahydro-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.

L5 ANSWER 5 OF 9 USPATFULL (Continued)



L5 ANSWER 6 OF 9 USPATFULL
ACCESSION NUMBER: 2001:158338 USPATFULL
TITLE: Regulators of the hedgehog pathway, compositions and uses related thereto
INVENTOR(S): Dudek, Henryk, Wellesley, MA, United States
Ji, Benxiu, Sharon, MA, United States
PATENT ASSIGNEE(S): Curis, Inc., Cambridge, MA, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6291516	B1	20010918
APPLICATION INFO.:	US 1999-417564		19991014 (9)

	NUMBER	DATE
PRIORITY INFORMATION:	US 1999-115642P	19990113 (60)
	US 1999-119594P	19990210 (60)
	US 1999-142124P	19990702 (60)

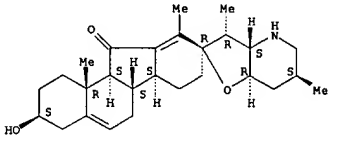
DOCUMENT TYPE: Utility
FILE SEGMENT: GRANTED
PRIMARY EXAMINER: Krass, Frederick
LEGAL REPRESENTATIVE: Vincent, Matthew P., Halstead, David P.Ropes & Gray
NUMBER OF CLAIMS: 16
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 19 Drawing Figure(s); 19 Drawing Page(s)
LINE COUNT: 3730
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention makes available methods and reagents for inhibiting aberrant growth states resulting from hedgehog gain-of-function, ptc loss-of-function or smoothened gain-of-function comprising contacting a cell with a compound, such as a polypeptide or small molecule in an amount sufficient to control the aberrant growth state, e.g., to agonize a normal ptc pathway or antagonize smoothened or hedgehog activity. The present invention further makes available methods and reagents for ameliorating the consequences of hedgehog loss-of-function, ptc gain-of-function, or smoothened loss-of-function comprising contacting a cell with a compound, such as a polypeptide or small molecule, in an amount sufficient to ameliorate the In certain embodiments, the subject compounds, e.g., a cAMP analog, adenylate cyclase agonist, or cAMP phosphodiesterase inhibitor, regulate cAMP levels, which in turn modulates activity of the hedgehog pathway.

IT **469-59-0**, Jervine **4449-51-8**, Cyclopamine
(regulation of the hedgehog pathway and smoothened gain-of-function by gene patched agonists)
RN 469-59-0 USPATFULL
CN Spiro[9H-benzo[a]fluorene-9,2'(3'H)-furo[3,2-b]pyridin]-11(1H)-one, 2,3,3'a,4,4',5',6,6',6a,6b,7,7',7'a,8,11a,11b-hexadecahydro-3-hydroxy-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)-(9CI) (CA INDEX NAME)

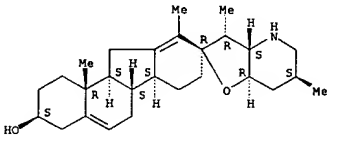
Absolute stereochemistry.

L5 ANSWER 6 OF 9 USPATFULL (Continued)



RN 4449-51-8 USPATFULL
CN Spiro[9H-benzo[a]fluorene-9,2'(3'H)-furo[3,2-b]pyridin]-3-ol, 1,2,3,3'a,4,4',5',6,6',6a,6b,7,7',7'a,8,11,11a,11b-octadecahydro-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.



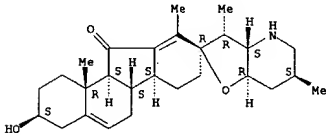
L5 ANSWER 7 OF 9 USPATFULL
ACCESSION NUMBER: 2001:152946 USPATFULL
TITLE: Cholesterol and hedgehog signaling
INVENTOR(S): Beachy, Philip A., Baltimore, MD, United States
Porter, Jeffrey A., Belmont, MA, United States
Cooper, Michael K., Baltimore, MD, United States
PATENT ASSIGNEE(S): The Johns Hopkins University School of Medicine, Baltimore, MD, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6288048	B1	20010911
APPLICATION INFO.:	US 1999-250385		19990212 (9)

	NUMBER	DATE
PRIORITY INFORMATION:	US 1998-74714P	19980213 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: GRANTED
PRIMARY EXAMINER: Krass, Frederick
LEGAL REPRESENTATIVE: Gray Cary Ware & Freidenrich LLP, Haile, Lisa A.
NUMBER OF CLAIMS: 3
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 11 Drawing Figure(s); 7 Drawing Page(s)
LINE COUNT: 1222
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention sterol-modified hedgehog polypeptides and functional fragments thereof. Methods of identifying compositions which affect hedgehog activity based on inhibition of cholesterol modification of hedgehog protein are described. In one aspect of the invention, the method provides a means for affecting cholesterol biosynthesis or transport in a cell comprising contacting a cell with an effective amount of a compound that affects hedgehog, thereby affecting cholesterol biosynthesis or transport. The effect may be inhibition or stimulation of cholesterol biosynthesis or transport.
IT **469-59-0**, Jervine
(cholesterol and hedgehog signaling, and modulation of cholesterol biosynthesis and transport)
RN 469-59-0 USPATFULL
CN Spiro[9H-benzo[a]fluorene-9,2'(3'H)-furo[3,2-b]pyridin]-11(1H)-one, 2,3,3'a,4,4',5',6,6',6a,6b,7,7',7'a,8,11a,11b-hexadecahydro-3-hydroxy-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.



L5 ANSWER 7 OF 9 USPATFULL (Continued)

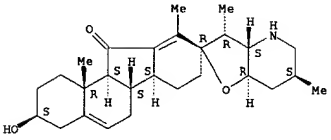
L5 ANSWER 8 OF 9 USPATFULL
ACCESSION NUMBER: 2000:67202 USPATFULL
TITLE: Method and apparatus for conditioning gas for medical procedures having humidity monitoring and recharge alert
INVENTOR(S): Ott, Douglas E., 682 Foster Rd., Macon, GA, United States 31210
Schaefer, John F., Macon, GA, United States
Gray, Robert I., Macon, GA, United States
PATENT ASSIGNEE(S): Ott, Douglas E., Macon, GA, United States (U.S. individual)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6068609		20000530
APPLICATION INFO.:	US 1998-81186		19980519 (9)

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Bockelman, Mark
ASSISTANT EXAMINER: Thompson, Michael M
LEGAL REPRESENTATIVE: Needle & Rosenberg, P.C.
NUMBER OF CLAIMS: 42
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 5 Drawing Figure(s); 4 Drawing Page(s)
LINE COUNT: 991
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB An apparatus for conditioning gas for use in a medical procedure, such as endoscopy, the gas being received into the apparatus from a gas source. The apparatus comprises a housing defining a chamber having an entry port and an exit port. A humidification means comprising at least one water-retainer layer is disposed within the chamber in the path of travel of the gas for humidifying the gas as it passes through the chamber. A humidity sensor is disposed within the chamber that senses the humidity of the gas exiting the chamber. A monitoring circuit is connected to the humidity sensor that detects when the chamber requires a recharge of liquid based on the humidity of the gas in the chamber, and generates a recharge signal indicative thereof. A charging port on the housing provides access into the chamber to recharge the chamber with water. A heating element and temperature sensor are also disposed within the chamber. A control circuit further regulates the temperature of the gas exiting the chamber.
IT **469-59-0**, Jervine **4449-51-8**, Cyclopamine
(use of steroidal alkaloid derivs. as inhibitors of hedgehog signaling pathways in relation to effect on cholesterol biosynthesis)
RN 469-59-0 USPATFULL
CN Spiro[9H-benzo[a]fluorene-9,2'(3'H)-furo[3,2-b]pyridin]-11(1H)-one, 2,3,3'a,4,4',5',6,6',6a,6b,7,7',7'a,8,11a,11b-hexadecahydro-3-hydroxy-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)-(9CI) (CA INDEX NAME)

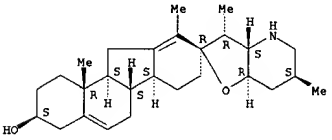
Absolute stereochemistry.

L5 ANSWER 8 OF 9 USPATFULL (Continued)



RN 4449-51-8 USPATFULL
CN Spiro[9H-benzo[a]fluorene-9,2'(3'H)-furo[3,2-b]pyridin]-3-ol, 1,2,3,3'a,4,4',5',6,6',6a,6b,7,7',7'a,8,11,11a,11b-octadecahydro-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.



L5 ANSWER 9 OF 9 USPATFULL
ACCESSION NUMBER: 2000:38195 USPATFULL
TITLE: Method and apparatus for rapid determinations of voltage and current in wires and conductors
INVENTOR(S): Singer, Jerome R., 2917 Avalon Ave., Berkeley, CA, United States 94705
Libove, Joel M., 34 Canyon View Dr., Orinda, CA, United States 94563

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6043641		20000328
APPLICATION INFO.:	US 1998-81263		19980519 (9)

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 1998-25043, filed on 17 Feb 1998
DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Do, Diep N.
LEGAL REPRESENTATIVE: Cohen, Howard
NUMBER OF CLAIMS: 22
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 7 Drawing Figure(s); 3 Drawing Page(s)
LINE COUNT: 489
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

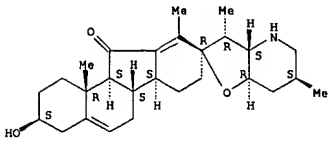
AB A device for non-contact, non-invasive measurement of current or power in a wire, cable or conductor includes a small coil having multiple turns with a thin ferromagnetic strip. The coil may be secured to a wand or housing adapted to be used to place the coil in close proximity to the wire, cable or conductor, whereby a voltage is induced in the coil. An amplifier and or an analog or digital signal processor is utilized to increase sensitivity. A readout indicates the magnitude of the induced voltage, and a scaling device renders the readout display indicative of the current or power in the wire, cable, or conductor. The readout may comprise a digital display, a series of light emitting devices, an oscilloscope, a digital computer display system, or a flashing light emitting device having a flash rate proportional to the magnitude of the voltage. The device may be constructed in a wand or pen-like fashion, with the coil and strip incorporated into the wand. The device may be combined with a voltage sensor to read out relative voltages.

IT **469-59-0**, Jervine **4449-51-8**, Cyclopamine
(use of steroidal alkaloid derivs. as inhibitors of hedgehog signaling pathways in relation to effect on cholesterol biosynthesis)

RN 469-59-0 USPATFULL
CN Spiro[9H-benzo[a]fluorene-9,2'(3'H)-furo[3,2-b]pyridin]-11(1H)-one, 2,3,3'a,4,4',5',6,6',6a,6b,7,7',7'a,8,11a,11b-hexadecahydro-3-hydroxy-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)-(9CI) (CA INDEX NAME)

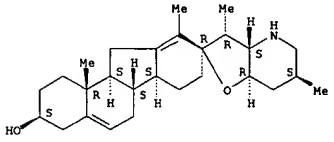
Absolute stereochemistry.

L5 ANSWER 9 OF 9 USPATFULL (Continued)



RN 4449-51-8 USPATFULL
CN Spiro[9H-benzo[a]fluorene-9,2'(3'H)-furo[3,2-b]pyridin]-3-ol, 1,2,3,3'a,4,4',5',6,6',6a,6b,7,7',7'a,8,11,11a,11b-octadecahydro-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.



=> d all 1-37

L7 ANSWER 1 OF 37 CAPLUS COPYRIGHT 2002 ACS
AN 1966:449755 CAPLUS
DN 65:49755
OREF 65:**9343e-f**
TI Isolation and identification of alkaloids from Veratrum lobelianum. I
AU Shinkarenko, A. L.; Bondarenko, N. V.
CS Pharm. Inst., Pyatigorsk
SO Rast. Resursy (1966), 2(I), 45-50
DT Journal
LA Russian
CC 61 (Plant Biochemistry)
AB The total amt. of alkaloids in the plants from Northern Caucasus at 1217-2000 m. above sea level was 0.23-1.4 in the leaves, 0.6- 1.86 in the roots, and 0.09-1.41% in the stalks, during vegetation, blooming, and fruiting. The ether was replaced by CHCl3 in Poethke gravimetric method (CA 31, 81107). The presence of 16 individual substances, with pos. Dragendorff test, was established in the CHCl3 ext. by formamide paper chromatography, with CHCl3, CHCl3-C6H6, and CHCl3-dioxane as solvents. Jervine, by Poethke method, and germidine, by chromatography, were isolated and identified. At altitudes of 1800 to 2000 m., the alkaloid content was generally higher. 27 references.

L7 ANSWER 2 OF 37 CAPLUS COPYRIGHT 2002 ACS
AN 1966:449754 CAPLUS
DN 65:49754
OREF 65:**9343d-e**
TI Mineral nutrient studies in sugarcane
AU Bishop, R. T.
SO Proc. Ann. Congr. S. African Sugar Technologists' Assoc. (1965), 39, 128-33
DT Journal
LA English
CC 61 (Plant Biochemistry)
AB The abs. amts. of N, P, K, Ca, Mg, and Na in the aboveground portions of the plant were detd. during maturation. The correlation coeffs. between concns. of nutrients (N, P, K, Ca, Mg, Na, Cu, and Mn) in the third leaf blade and environmental factors (rainfall, soil moisture, stalk increment, air temp., total radiation, evapn., and soil temp.)are presented. The effect of the age of the crop on concn. of nutrients in third leaf blades is considered.

L7 ANSWER 3 OF 37 CAPLUS COPYRIGHT 2002 ACS
AN 1966:414987 CAPLUS
DN 65:14987
OREF 65:**2813b-c**
TI Teratogenic compounds of Veratrum californicum (Durand). I. Preparation and characterization of fractions and alkaloids for biologic testing
AU Keeler, Richard F.; Binns, Wayne
CS Animal Disease & Parasite Res. Div., U.S. Dept. of Agr., Ames, IA
SO Can. J. Biochem. (1966), 44(6), 819-28
DT Journal
LA English
CC 66 (Mammalian Pathological Biochemistry)
AB The isolation and identification of 4 known alkaloids (jervine, veratrosine, pseudojervine, and isorubijervine) was achieved from teratogenic fractions of V. californicum. Two addnl. alkaloids, not previously reported and designated alkaloids X and V, were also isolated from these fractions and partially characterized.

L7 ANSWER 4 OF 37 CAPLUS COPYRIGHT 2002 ACS
AN 1966:414986 CAPLUS
DN 65:14986
OREF 65:**2812f-h,2813a-b**
TI Mechanism for bradycardia induced by acute systemic anoxia in the dog
AU Litwin, J.; Skolasinska, K.
CS School Med., Warsaw
SO Arch. Ges. Physiol. (1966), 289(2), 109-21
DT Journal
LA English
CC 66 (Mammalian Pathological Biochemistry)
AB Studies on acute systemic anoxia were carried out on 46 heparinized, chloralose-anesthetized mongrel dogs weighing 9.5-20.0 kg., some of which were allowed to breathe spontaneously, others were artificially ventilated, tubocurarine.HCl 0.1 mg./kg. body wt., being administered intravenously to block the neuromuscular transmission. The artificially ventilated animals were divided into a closed- and an open-chest group. All animals exhibited a biphasic response of the heart, consisting of a primary tachycardia and a secondary bradycardia; the latter was marked and amounted to 45.8 and 67.2% redn. of heart rate in artificially ventilated and in spontaneously breathing animals, resp. The primary tachycardia was usually more distinct in spontaneously breathing animals as compared to those in which the respiration was controlled. Since bilateral vagotomy, atropinization, and ganglionic blockade considerably reduced the intensity of bradycardia and, in some cases, abolished it completely, it appeared that anoxic bradycardia was due mainly to an increased tone of the vagal cardioinhibitory center. Moderate slowing of the heart, which persisted in some expts., following vagotomy, atropinization, and ganglionic blockade, appeared to be the outcome of the local depressant action of severe anoxia on the heart itself, but the local action of anoxia was only of secondary importance as compared to the nervous vagal mechanism. On the other hand, spinal-cord destruction and bilateral adrenalectomy both caused a significant enhancement of secondary anoxic bradycardia, indicating that a strong stimulation of the sympatho-adrenal system occurred throughout the anoxia, resulting in primary tachycardia and, in later stages of anoxia, opposing vagal slowing of the heart. A very marked exaggeration of bradycardia after adrenalectomy alone proved that increased release of catechol amines from the adrenal medulla was of paramount importance in this regard. Anoxic bradycardia did not result from stimulation of either baro- or chemoreceptors in the sino-aortic arch; some other mechanism, gave rise to the increased vagal discharge to the heart accounting for the anoxic bradycardia and constituted the principal factor responsible for cardiac slowing in anoxia; the reflexes from carotid and aortic receptors appeared to be of secondary importance. Such a mechanism may consist either in a reflex initiated at some unidentified receptors or in a central stimulating effect of anoxia on vagal cardioinhibitory neurons.

L7 ANSWER 5 OF 37 CAPLUS COPYRIGHT 2002 ACS
AN 1966:404189 CAPLUS
DN 65:4189
OREF 65:774b-h
TI Photochemical reactions, XXXVI. Photolytic degradation of O-acetyljervine: structure and photochemical reactions of the nitrogen-free main products
AU Bozzato, G.; Schaffner, K.; Jeger, O.
CS Eidg. Tech. Hochsch., Zurich, Switz.
SO Chimia (Aarau) (1966), 20(4), 114-16
DT Journal
LA German
CC 42 (Steroids)
GI For diagram(s), see printed CA Issue.
AB cf. CA 64, 19714g. On irradiation in dioxane with light .lambda. 253.7 m.mu., O-acetyljervine (I) reacted to form II, III, and IV. The N-acetyl deriv. (V) was photostable under the same conditions. III, m. 135-6.degree., was photodecarbonylated to VI, m. 108.degree., and IV, m. 128.5.degree., was photohydrolyzed to VII, m. 111.degree.. III formed an aldoxime (VIII), m. 141-2.degree., which was converted (MeSO3H, pyridine) to the nitrile (IX), m. 152.degree.. Treatment of VI with 0.1N KOH at room temp. yielded X, m. 158-66.degree.; identical with the product formed from XI (Fried and Klingsberg, CA 48, 13701b) by hydrogenation (Pd-C, EtOH) to XII, m. 139.degree., followed by hydrolysis with K2CO3-MeOH to XIII, m. 100.degree. and epimerization (Me2SO, KO-tert-Bu) to X. The vinylidene ether structure of IV was shown by ozonolysis and hydrolytic decompn. to the acetaldehyde, identified by its 2,4-dinitrophenylhydrazone (30% yield), and by hydrogenation (Pd-C, EtOH) of the vinylidene double bond to XIV, m. 143.5.degree.. IV and XIV were hydrolyzed (KOH, boiling MeOH) to XV, m. 127.5.degree., and XVI, m. 189-90.degree., resp. XIV was also reacetylated to IV, which was chem. hydrolyzed (H2SO4, glacial HOAc) to VII, in turn converted (KOH, boiling aq. MeOH) to XVII, m. 108.degree.. XVII was acetylated to the acetoxyketone (XVIII), m. 92.degree.. Ir, uv, and N.M.R. data and [.alpha.]D for the various compds. were reported and discussed.

L7 ANSWER 6 OF 37 CAPLUS COPYRIGHT 2002 ACS
AN 1966:404188 CAPLUS
DN 65:4188
OREF 65:774a-b
TI Rearrangement in the substitution reaction of 3-oxo-4.beta.-bromo-5.beta.-steroids
AU Sato, Yasuo; Muko, Masaaki; Ogaki, Yuichi; Takahashi, Tomoyoshi; Kimura, Takako; Aoki, Hiromitsu; Hagitani, Akira
CS St. Paul's Univ., Tokyo
SO Bull. Chem. Soc. Japan (1966), 39(4), 855
DT Journal
LA English
CC 42 (Steroids)
AB 4.beta.-Bromo-5.beta.-cholestan-3-one (8 g.) in 280 cc. AcOH refluxed 6 hrs. under N with 56 g. AcOK yielded 2.6 g. 2.beta.-acetoxy-5.beta.-cholestan-3-one, m. 149-51.degree., [.alpha.]589 8.0.degree., [.alpha.]400 8.0.degree., [.alpha.]308 -195.0.degree., [.alpha.]285 205.0.degree.. Me 4.beta.-bromo-3-oxocholanate (2 g.), 11 g. AcOK, and 55 cc. AcOH yielded similarly 1.3 g. Me 2.beta.-acetoxy-3-oxocholanate, m. 168.5-70.degree., [.alpha.]589 5.5.degree., [.alpha.]380 9.0.degree., [.alpha.]309 -190.0.degree., [.alpha.]285 230.0.degree..

L7 ANSWER 7 OF 37 CAPLUS COPYRIGHT 2002 ACS
AN 1966:96686 CAPLUS
DN 64:96686
OREF 64:18245a-b
TI Some pharmacologic effects of Veratrum alkaloids in sheep and goats
AU Buck, W. B.; Keeler, R. F.; Binns, Wayne
CS Natl. Animal Disease Lab., Ames, IA
SO Am. J. Vet. Res. (1966), 27(116), 140-54
DT Journal
LA English
CC 68 (Pharmacodynamics)
AB Infusion of EtOH exts. and purified alkaloids from V. californicum and ester alkaloidal mixts. from V. viride into the jugular vein resulted in a potent hyperglycemic effect in intact and adrenalectomized female sheep and goats. When large amts. of alkaloid were infused, there was a concomitant increase in electroencephalogram (EEG) wave amplitude, and this was followed in a few sec. by complete cessation of EEG activity. This treatment also reduced respiration and stimulated skeletal muscle and gastrointestinal activity. Administration of O by artificial respiration reversed the effects on the EEG and enabled the animals to recover rapidly. The hyperglycemic effect, which may have resulted from an inhibition of glucose utilization, probably caused cessation of EEG activity and may explain the mechanism by which Veratrum produces congenital cyclopian deformities in lambs (ibid. 24(103), 1164-75(1963)). 17 references.

L7 ANSWER 8 OF 37 CAPLUS COPYRIGHT 2002 ACS
AN 1965:498716 CAPLUS
DN 63:98716
OREF 63:18209h,18210a-c
TI C-N or-D-homosteroids and related alkaloids. IV. 11-Deoxojervine, a new alkaloid from Veratrum species
AU Masamune, Tadashi; Mori, Yoichi; Takasugi, Mitsuo; Murai, Akio; Ohuchi, Shigehiro; Sato, Norio; Katsui, Nobukatsu
CS Hokkaido Univ., Sapporo
SO Bull. Chem. Soc. Japan (1965), 38(8), 1374-8
DT Journal
LA English
CC 42 (Steroids)
AB cf. CA 62, 14774c. The benzene exts. of alkalized, ground roots of Veratrum album var glandifiorum subjected to sepn. by a modified Jacobs' procedure (cf. Stoll, et al., CA 50, 10748g), gave 11-deoxojervine (I) probably identical with Takaoka's sterol (Nippon Kagaku Zasshi 60, 1090(1939)), veratramine (II), rubijervine, solanidine, and .beta.-sitosterol. I ([.alpha.]23D -44.2.degree.) m. 236-8.degree. (MeOH) (crystals contained solvent); on drying at the b.p. of xylene, the m.p. changed to 237-8.degree. and the ir spectrum also changed. Acetylation of 101 mg. I with 1 ml. Ac2O and 1 ml. pyridine at 100.degree. gave 84 mg. 3-N-diacetyl-11-deoxojervine (III). III, recrystd. from aq. alc., m. 168-4.degree. (crystals contained solvent), resolidified and again m. 195-7.degree.; III dried at the b.p. of xylene m. 195-7.degree. and had [.alpha.]23D 1.1.degree.. Attempted redn. of I with LiAlH4 or Li in liquid NH3 gave quant. recovery of I. I (220 mg.) in 50 ml. MeOH treated with 3.1 ml. concd. H2SO4 and 55 mg. Fe2(SO4)3 in the cold, and the mixt. stirred 5 hrs. at room temp. gave 10 mg. II. Wolff-Kishner redn. of 5 g. jervine according to Barton's procedure (B., et al., CA 49, 12505e) gave 1.1 g. I, and 0.45 g. conjugated diene (IV), m. 211-13.degree., [.alpha.]23D, 3.5.degree. when recrystd. from Me2CO or MeOH. Acetylation of 77 mg. IV with Ac2O-pyridine at 100.degree. gave 48 mg. O,O,N-triacetyl deriv., m. 116-18.degree., [.alpha.]23D 46.degree. after recrystn. from MeOH-EtOH. On the basis of these facts and of the ir, uv, and N.M.R. spectra, the structure shown for IV is suggested. Jervin-11.beta.-ol (507 mg.) in 500 ml. boiling BuOH treated over 5 hrs. with 36 g. Na, and the mixt. refluxed an addnl. 1.5 hrs., gave 83 mg. IV, which formed the expected triacetyl deriv. (m. 120-1.degree.). Direct transformation of I into II supports the .alpha.-configuration of the H on C-9. The ir, uv, and N.M.R. spectra of many of the compds. are given.

L7 ANSWER 9 OF 37 CAPLUS COPYRIGHT 2002 ACS
AN 1965:498715 CAPLUS
DN 63:98715
OREF 63:18208c-h,18209a-h
TI Reactions of epoxides. VII. Acid-catalyzed reactions of 13,17a-epoxy- and 17a,18-epoxy-C-nor-D-homospirostan
AU Coxon, J. M.; Hartshorn, M. P.; Kirk, D. N.
CS Univ. Canterbury, Christchurch, N. Z.
SO Tetrakedron (1965), 21(9), 2489-99
DT Journal
LA English
CC 42 (Steroids)
GI For diagram(s), see printed CA Issue.
AB cf. CA 63, 8447c. C-Nor-D-homo-13(17a)-olefin (I, 500 mg.) in 80 ml. dioxane treated with 0.1M aq. HOBr 40 min. at 20.degree. and the dil. mixt. filtered gave 480 mg. bromohydrin (II, R : Br) (III), m. 130-1.degree. (ligroine), [.alpha.]D -36.degree. (C 0.5). III (135 mg.) in 10 ml. alc. kept 18 hrs. at 20.degree. with 150 mg. KOH gave 80 mg. 3.beta.-hydroxy-13.alpha.,17.alpha.-epoxide, m. 215-18.degree., converted by acetylation with 1:10 Ac2O-C5H5N in 16 hrs. to 3.beta.-acetoxy-13.alpha.,17a.alpha.-epoxide (IV), m. 194-6.degree.. II (R : OH) (V, 3 g.) in 25 ml. C5H5N treated dropwise at 0.degree. with 2.5 ml. SOCl2 and the dild. mixt. extd. with Et2O gave the 13.beta.,17a.beta.-epoxide (VI), m. 187.5-9.0.degree.. Since V is readily obtained by acid-catalyzed hydrolysis of the mixed .alpha.- and .beta.-epoxides IV and VI, formed by epoxidation of I, the tedious chromatographic sepn. to produce IV and VI can be avoided. The ready availability of the tetrasubstituted epoxides led to their inclusion in studies of BF3-catalyzed rearrangements. IV (1 g.) in 100 ml. anhyd. C6H6 treated 30 sec. with 1 ml. BF3-Et2O and dild. with Et2O, the washed soln. evapd. and chromatographed on 80 g. Al2O3, eluted with 8:1 ligroine-C6H6 and the eluate (333 mg.) csystd. from C5H12 and MeOH gave the 8(14), 13(17a)-diene (VII), m. 160-2.degree., [.alpha.]D -62.degree. (c 1.17). Elution with 1:1 ligroine-C6H6 gave 300 mg. gum (VIII), [.alpha.]D -53.degree. (C 1.33). Further elation with C6H6 gave 180 mg. hecogenin acetate, m. 250-2.degree. (MeOH), [.alpha.]D -7.degree., and final elution with Et2O gave the fluorohydrin II (R : F) (IX), m. 176-7.degree. (C6H14), [.alpha.]D -62.degree. (c 0.73). VIII (175 g.) treated with 0.5 ml. BzH in 10 ml. alc. contg. 60 mg. KOH 18 hrs. at 20.degree. and the product isolated with Et2O, chromatographed on Al2O3, and elated with C6H6 gave 143 mg. 13-acetyl-C-nor compd. (X) benzylidene deriv., [.alpha.]D -38.degree. (c 0.93). Elution with Et2O gave 29 mg. 3.beta.-hydroxy-C-nor-D-homo-17a ketone (XI), [.alpha.]D -42.degree. (C 1.12). IX (100 mg.) and 100 mg. KOH heated under reflux 4 hrs. in 25 ml. 90% aq. alc. gave the 3.beta.-hydroxy-13.alpha.,17a.alpha.-oxide, acetylated to IV. IV (800 mg.) and 0.8 ml. BF3-Et2O kept 1 hr. in 80 ml. anhyd. Et2O gave 646 mg. IX. IX (140 mg.) and 0.16 ml. BF3-Et2O kept 22 min. in 16 ml. C6H6 gave material, .lambda. 251 m.mu. (.epsilon. 3200) contg. 14% diene VII. Crystn. from MeOH gave 20 mg. hecogenin acetate, and chromatography of the residues on Al2O3 gave a ketonic fraction consisting mainly of X and unreacted IX. VI (500 mg.) in 50 ml. dry C6H6 treated 3 min. with 0.5 ml. BF3-Et2O and isolation of the steroidal product gave 17a.beta.-hydroxy-17a.alpha.-methyl-.DELTA.8(14)-olefin (XII), m. 170-1.degree. (MeOH), [.alpha.]D -94.degree. (c 1.03), deep yellow color with C(NO2)4, dehydrated with SOCl2-C5H5N to VII, thus supporting the trans- 13.alpha.,17a.beta.-configuration of XII. The reaction between VI and BF3 in Et2O gave only unreacted VI and the fluorohydrin (XIII), m. 130-7.degree. (decompn.), [.alpha.]D -50.degree.

L7 ANSWER 9 OF 37 CAPLUS COPYRIGHT 2002 ACS (Continued)

L7 ANSWER 9 OF 37 CAPLUS COPYRIGHT 2002 ACS (Continued)
(c 0.96), hydrolyzed to the 3.beta.-hydroxy-13.beta.,17a.beta.-epoxide, m. 128-40.degree., [.alpha.]D -60.5.degree., acetylated to VI. Earlier work (CA 63, 7081a) 18, (759)(1965)] made available two 17a,18-epoxides (XIV, XV) and their behavior with BF3 and with aq. HClO4 was exam. XIV (1.3 g.) and 1.3 ml. BF3-Et2O kept 15 min. in 130 ml. C6H6 and the products isolated gave 60% 18-aldehyde (XVI), m. 186-8.degree., [.alpha.]D -63.degree. (c 0.92), not epimerized by base and thus confirming the .alpha.-configuration of the CHO group. Two unidentified minor products, m. 167-73.degree., [.alpha.]D -46.degree. (c 1.22); and m. 187-90.degree., [.alpha.]D -9.degree. (c 1.0), and XVI were also isolated by chromatography in 210, 210, and 330 mg. amts. Rearrangement of XIV with HClO4 in aq. dioxane 10 min. at 20.degree. gave 83% XVI, together with the 18-hydroxy-13(17a).DELTA.-olefin (XVII, R : H, OH) (XVIII), m. 204-6.degree., [.alpha.]D -64.degree. (c 1.28), acetylated to XVII (R : H, OAc), m. 159-63.degree., [.alpha.]D -48.degree. (c 0.87), reduced in turn by Li-EtNH2 to the endocyclic olefin I. The behavior of XV with BF3 was very unusual. XV (2.3 g.) in 230 ml. C6H6 treated 30 sec. with 2.3 ml. BF3-Et2O and the isolated product adsorbed on 80 g. Al2O3, eluted with 1:1 ligroine-C6H6 and the gum (1.5 g.) crystd. from MeOH gave the cyclic ether (XIX), m. 209-10.degree., [.alpha.]D -62.5.degree. (c 0.83). Elution with C6H6 gave the fluorohydrin (XX, R : F) (XXI), m. 206-9.degree., [.alpha.]D -64.degree. (c 1.0); 3,18-diacetate, [.alpha.]D -55.degree. (c 1.18); 3 acetate 18-benzoate, [.alpha.]D -52.degree. (c 0.87). XXI (50 mg.), 50 mg. KOH, and 10 ml. aq. alc. refluxed 2 hrs. gave the 3-hydroxy fluorohydrin, m. 258-9.degree. (MeOH), [.alpha.]D -63.degree. (c 0.77). The XX residues (398 g.) in 5 ml. dioxane treated 18 hrs. at 20.degree. with 400 mg. 2,3-dichloro-5,6-dicyanobenzoquinone and the mixt. poured into Et2O, the NaOH-washed soln. evapd., and the residue adsorbed on 40 g. Al2O3, eluted with C6H6-Et2O and the eluate (90 mg.) crystd. from MeOH gave the aldehyde (XVII, R : O), m. 197-9.degree., [.alpha.]D -41.degree. (c 0.98). Further elution with Et2O gave more XXI (total yield 590 mg.). XV (1.97 g.) in 200 ml. Et2O treated 90 min. with 2 ml. BF3-Et2O and chromatographic sepn. of the products gave XVIII and XIX in 1.17 g. and 769 mg. yields, resp. Treatment of 500 mg. XV in 16 ml. CH2Cl2 and 32 ml. Me2CO with 0.5 ml. 1.5M aq. HClO4 for 10 min. at 20.degree. gave 332 mg. XVIII. Although the results shed no light on the configuration of the 17a,18-diol (XX, R : OH) (XXII), m. 126-8.degree. (C6H14), [.alpha.]D -33.degree. (c 1.132), obtained previously (CA 49, 9685h) by the action of OsO4 in C5H5N in C6H6-dioxane on the 17a(18)-olefin. Acetylation of XXII gave the 3.beta.,18-diacetate, m. 218-10.degree., [.alpha.]D -22.degree. (c 0.90), hydrolyzed by KOH in aq. alc. to XV. The 18-acetate (200 mg.) in 10 ml. pyridine was treated at -40.degree. with 0.2 ml. SOCl2, the reaction mixt. poured into H2O, and the product extd. with pentane and chromatographed over deactivated Al2O3 to give 158 mg. XXIII, oil, [.alpha.]D -60.degree. (c 1.54). The 18-aldehyde (XVI) (250 mg.) and 1.5 ml. 60% N2H4.H2O heated 1 hr. at 120.degree. in HOCH2CH2OH and the mixt. heated (N atm.) to 200.degree. with 1 g. KOH and kept 2 hrs. at 200.degree., extd. with EtO and the isolated product acetylated gave the 17a.alpha.-methyl deriv. (XXIV, 17a.alpha.-Me), m. 154-5.degree. (MeOH), [.alpha.]D -60.degree. (c 0.85). The 17a(18)-olefin (250 mg.) in 10 ml. AcOH hydrogenated 7 hrs. over 150 mg. 10% Pd-C and the product crystd. from MeOH gave 222 mg. XXIV (17a.beta.-Me), m. 175-6.degree., [.alpha.]D -49.5.degree. (c 1.07). The 18-Me signals in XXIV are split into doublets by spin-spin coupling with the 17a proton and appear in a region contg. 19-Me and 27-Me signals. The tabulated .tau. values are to be regarded as tentative.

L7 ANSWER 10 OF 37 CAPLUS COPYRIGHT 2002 ACS
AN 1965:91207 CAPLUS
DN 62:91207
OREF 62:16328g-h,16329a-g
TI Jervine. XV. Hydrogenation of the 13,17a-double bond
AU Wintersteiner, O.; Moore, M.
CS Squibb Inst. Med. Res., New Brunswick, NJ
SO Tetrahedron (1965), 21(4), 779-90
DT Journal
LA English
CC 42 (Steroids)
GI For diagram(s), see printed CA Issue.
AB cf. CA 62, 9200f. N-Acetyltetrahydroisojervine (503 mg., CA 58, 2479f) in 5% KOH-MeOH refluxed (N atm.) 1 hr. and the H2O-washed product recrystd. from MeOH-EtOAc gave 364 mg. .alpha.,.beta.-unsatd. ketone (I, R = H) (II), m. 276-9.degree., [.alpha.]22D -12.7.degree. (c 0.883); triacetate (I, R = Ac) (III), m. 262-4.degree. (EtO-Ac-C6H14), [.alpha.]27D -27.4.degree. (c 0.948). II (149 mg.) in 15 ml. AcOH catalytically hydrogenated with 80 mg. prereduced PtO2 in 5 hrs. with 1.07 mole equivs. H and the filtered soln. evapd. the residue kept overnight in 50% aq. EtOH, and the cryst. deposit recrystd. from EtOAc gave 12 mg. II, converted to III for identification. The residue from the combined mother liquors acetylated and recrystd. from alc. and from EtOAcC6H14 yielded 37 mg. impure C/D trans linked isomer (IV, R = Ac), m. 226-9.degree., [.alpha.]22D -8.6.degree. (c 1.059, 1:1 MeOH-tetrahydrofuran), showing mutarotation in this solvent contg. 2% KOH from [.alpha.]21D 12.0 (c 1.075) to -24.2.degree. in 23 hrs. IV contained 70% starting material present as III. Part of IV equilibrated in alk. soln. and the product crystd. from EtOAc gave pure N-acetyl deriv. (V, R = H) (VI), m. 268-70.degree., [.alpha.]21D -39.degree.. Isolation of VI and the characteristic shape of the mutarotation curve left no doubt as to the identity of the hydrogenation product as IV. Accordingly the side chain in the parent ketone II must be .beta.-oriented and trans addn. to the double bond occurred. The formation of IV as the kinetically favored product was explained by the predominance of stereoelectronic over purely steric control of proton addn. of C-13 in the re-ketonization of an enolic intermediate arising by 1,4-addn. of H to the enone system of II. The observation that the hydrogenation of jervine (VII, R = R' = H, .DELTA.13-17a) afforded tetrahydrojervine (CA 37, 40727) by cis(.alpha.,.alpha.)-addn. was confirmed, and the product characterized as diacetyltetrahydrojervine, m. 214-17.degree.. O,N-Diacetyljervine VII (R = R' = Ac, .DELTA.13-17a, 3.06 g.) in 300 ml. AcOH hydrogenated 22 hrs. with 1.54 g. prereduced Pt catalyst and the residue on evapn. of the filtered soln. taken up in EtOAc, dild. with C6H14 and the ppt. recrystd. from warm EtOAc, MeOH-EtOAc, and Me2CO, the product (168 mg., m. 240-4.degree.) chromatographed on Al2O3 and eluted in 49: 1 Et2O-MeOH gave the 3,N-diacetate (VIII), m. 240-3.degree., [.alpha.]28D -27.8.degree. (c 1.148), isomeric with IV, V and the 17-epimeric dihydro deriv. (IX). VIII gave a triacetate (X), [.alpha.]30D -23.3.degree.. Hydrolysis of VIII by boiling 30 min. in 5% KOH-MeOH gave the N-acetyl deriv. (XI), m. 220-1.degree. (EtOAc), [.alpha.]31D -27.3.degree. (c 0.952). Acetylation of XI gave an amorphous product with ir spectrum identical with that of X. Mutarotation of VIII in 1:1 MeOH-tetrahydrofuran contg. 2% KOH gave initial [.alpha.]30-1D -35.0.degree. shifting to -38.9.degree. in 5 hrs. (c 1.389). The mixt. yielded the N-acetyl deriv. (XI). The mother liquor from VIII evapd. and the residue (2.5 g.) acetylated, chromatographed and the primary eluates rechromatographed gave almost pure triacetyltetrahydroisojervine (XIII), m. 170-2.degree., [.alpha.]30D 66.3.degree. (c 1.033). Further elution with 1:1 C6H6-Et2O gave IX triacetate, [.alpha.]28D -14.7.degree. (CHCl3), showing mutarotation in alk. MeOH-tetrahydrofuran, hydrolyzed in 5% KOH-MeOH to the N-Ac: deriv.,

L7 ANSWER 10 OF 37 CAPLUS COPYRIGHT 2002 ACS (Continued)
m. 235-9.degree., [.alpha.]25D -13.degree. (c 1.192). With O,N-diacetyljervine, the primary event in hydrogenation was the hydrogenolysis of the 17,23- ether linkage and the formation of a free 23-OH group. This may have been accompanied by deconjugation of the enone grouping leading to 3,N-diacetyltetrahydroisojervine, isolated as XIII, or followed by hydrogenation of the double bond and thus leading by trans (13.beta.,17a.alpha.)-addn. to the 3,N-diacetate of IX and to the configurationally as yet undefined new stereoisomer VIII. These results were discussed in terms of their dependence on the ease of protonation of the 17,23-ether O and the direction of polarization of the enone system before and after cleavage of the 17-O bond.

L7 ANSWER 11 OF 37 CAPLUS COPYRIGHT 2002 ACS
AN 1965:91206 CAPLUS
DN 62:91206
OREF 62:16328d-g
TI Nitrogen-containing steroids. X. The conversion of halohydrins to aziridines and oxazolines
AU Ponsold, Kurt; Groh, Helmut
CS Univ. Jena, Germany
SO Chem. Ber. (1965), 98(4), 1009-12
DT Journal
LA German
CC 42 (Steroids)
AB cf. CA 62, 10476e. 2.alpha.-Bromo-3.alpha.-cholestanol (I) (3.0 g.) in 60 cc. C5H5N treated 48 hrs. at 0.degree. with 2.0 cc. MeSO2Cl yielded 3.1 g. methanesulfonate (II) of I, leaflets, m. 232-3.degree. (CHCl3-Me2CO), [.alpha.]20D 52.degree. (c 2, CHCl3). II (2.5 g.) in 150 cc. Me2SO stirred 4 hrs. at 80.degree. with 7.0 g. NaN3 gave 1.95 g. 2.alpha.-bromo-3.beta.-azidocholestane (III), m. 84.degree. (MeOH), [.alpha.]20D 10.degree. (c 2, CHCl3). III (2.0 g.) in 16 cc. C6H6 and 1.1 g. Ph3P refluxed about 0.5 hr. and evapd., and the crude triphenylphosphinimine dissolved in 15 cc. refluxing AcOH and refluxed 1 hr. with 5 cc. 48% HBr yielded 0.96 g. 2.alpha.-bromo-3.beta.-aminocholestane-HBr (IV.HBr), m. 285.degree. (EtOH). IV.HBr (0.5 g.) in 50 cc. boiling EtOH with 0.5 g. KOH in a little EtOH yielded 0.25 g. IV, m. 116.degree. (MeOH). III (3.0 g.) in 100 cc. AcOEt hydrogenated 2 hrs. at room temp. over 0.4 g. PtO2 yielded 2.5 g. IV, m. 112-14.degree. (MeOH), [.alpha.]20D 5.degree. (c 1, C5H5N). IV (0.90 g.), 1 g. KOH, and 10 cc. MeOCH2CH2OH refluxed 20 min. yielded 0.55 g. 2.beta.,3.beta.-iminocholestane (V), m. 104-5.degree.. V (0.20 g.) in 2 cc. C5H5N treated 1 hr. at room temp. with 2 cc. Ac2O yielded 0.18 g. N-Ac deriv. of V, m. 134-5.degree. (Me2CO), [.alpha.]20D 37.degree. (c 1, CHCl3). IV (0.5 g.), 5 cc. C5H5N, and 5 cc. Ac2O yielded overnight at room temp. 0.45 g. N-Ac deriv. (VI) of IV, needles, m. 199.degree. (decompn.) (Et2O), [.alpha.]25D -9.degree. (c 1, CHCl3). VI (0.50 g.), 1 g. KOH, and 10 cc. MeOCH2CH2OH refluxed 15 min. yielded 0.34 g. 2'-methyloxazolino[5',4'2,3]cholestane (VII), needles, m. 89.degree. (Me2CO), [.alpha.]25D 52.degree. (c 1, CHCl3). VII (0.1 g.) in refluxing Et2O with picric acid in Et2O gave 0.11 g. picrate, needles, m. 204-5.degree. (Me2CO), [.alpha.]20D -30.degree. (c 1, CHCl3). The reaction of the diaxial 2.beta.-bromocholestan-3.alpha.-ol methanesulfonate with NaN3 yielded not the expected diaxial haloazide but rather an unsatd. azide.

L7 ANSWER 12 OF 37 CAPLUS COPYRIGHT 2002 ACS
AN 1965:82827 CAPLUS
DN 62:82827
OREF 62:14774c-h,14775a-b
TI C-Nor-D-homosteroids and related alkaloids. III. C-9 Configuration of jervine and related alkaloids
AU Masamune, Tadashi; Takasugi, Mitsuo; Mori, Yoichi
CS Hokkaido Univ., Sapporo, Japan
SO Tetrahedron Letters (1965), (9), 489-95
DT Journal
LA English
CC 42 (Steroids)
GI For diagram(s), see printed CA Issue.
AB cf. CA 61, 702d, 8351d. It was shown that jervine (1, R' = O) (II) and veratra nine (III, .delta.5) (IV) have the B/C trans configuration. III (no .delta.5), m. 191-3.degree., treated with (CH2CO)2NCl, the N-chloro deriv. treated with NaOMe and subsequently hydrolyzed gave an aldehyde, degraded with BuNO2 and BuONa to an oxime, m. 228-32% hydrolyzed to give a ketone (V), C21H28O2, m. 169-71.degree., .nu. 1667, 1597 cm.-1, .lambda. 258 m.mu. (.epsilon. 15,000), N.M.R. .tau. 7.42, 7.56, 9.05, identical with the ketone prepd. from hecogenin by Mitsuhashi and Shibata (CA 61, 13374b). Birch redn. of IV with Li in EtNH2 in the presence of Me2CHOH yielded 33% main product (VI), m. 182-4.degree., .lambda. 210 m.mu. (.epsilon. 16,000); triacetyl deriv. m. 144-6.degree., .tau.4.58, 8.47. Catalytic hydrogenation of VI in AcOH over prereduced PtO2 gave the compds. VII, m. 174-6.degree. Rf 0.41, and VIII, m. 181-3.degree., Rf 0.58 (CA 61, 8351d). Treatment of 11-deoxojervine (IX) with Li and EtNH2 yielded 2 isomeric substances X, C27H43NO2, m. 157-9.degree., Rf 0.78, .nu. 3300, 1715, 1063, 877, 806 cm.-1, and XI, m. 190-2.degree., [.alpha.]D -53.6.degree. (95% alc.), Rf 0.56, v 3400, 1063, 883, 806 cm.-1 Hydrogenation of X gave a good yield of the 5,6-dihydro deriv. (XII), C27H45NO2, m. 155-7.degree., [.alpha.]D -59.4.degree., .nu. 3300, 1719, 1032, 878 cm.-1, also produced in good yield by direct hydrogenation of IX. On acetylation XII and XI gave the corresponding triacetyl derivs., m. 157-9.degree. .tau. 4.93, 5.17, 5.35, 8.34, 9.28, and m. 188-90.degree., [.alpha.]D - 10.2.degree. .tau. 4.61, 8.47, 9.02. The N.M.R. spectra indicated the presence of a C-18 Me group and suggested the configuration of the C/D ring linkage. Hydrogenation of XI gave mainly VII, m. 172-4.degree. Rf 0.43, .nu. 3300, 1041, 855 cm.-1, .tau. 8.35, 9.25. Oxidn. of diacetyljervin-11.beta.-ol with CrO3-C5H5N gave diacetyljervine, indicating that jervin-11.beta.-ol (XIII) has the same configuration at C-9 as II. Birch redn. of XIII gave 5% triol (XIV) and 50% diol (XV). XIV, m. 217-18.degree., Rf 0.15, was also obtained by redn. of 8,9-dihydroisojervine with LiAlH4. The diol XV, C27H43NO2, m. 198-9.degree., [.alpha.]D -64.9.degree., Rf 0.48, .nu. 3400, 1064, 885, 806 cm.-1, gave a triacetyl deriv., m. 188-90.degree., [.alpha.]D -12.3.degree., .tau. 4.58, 8.47, 9.02, showing cleavage of the ether bond and removal of the 11-OH group. Hydrogenation of XV gave 2 cryst. compds., XIII C27H45NO2, m. 184-6.degree., Rf 0.50, v 3400, 3300, 1041, 885 cm.-1, and VIII, C27H47NO2, m. 180-2.degree., Rf 0.59, v 3300, 1715, 1039, 878 cm.-1 XVI gave a triacetyl deriv., m. 201-4.degree., showing almost the same N.M.R. spectrum as that of the corresponding deriv. of XV. The spectrum of the triacetyl deriv. of VIII exhibited no sharp absorption near .tau. 8.4, suggesting satn. of the C-12, C-13 double bond. The above transformations involved no reaction affecting the C-9 configuration and established the B/C configuration of II, 11-deoxojervine, and IV.

L7 ANSWER 13 OF 37 CAPLUS COPYRIGHT 2002 ACS
AN 1965:82826 CAPLUS
DN 62:82826
OREF 62:14773h,14774a-c
TI Steroids in the adsorbed state. I. Adsorption of certain 5.alpha.- and 5.beta.-cholanic and etianic acid derivatives on activated alumina
AU Hodosan, Francisc; Pop-Gocan, Alexandra
CS Acad. R.P.R., Cluj
SO Studii Cercetari Chim. Bucharest (1964), 13(8-9), 559-66
DT Journal
LA Romanian
CC 42 (Steroids)
AB Steroids of medium and low polarity of the 5.alpha.- and 5.beta.-cholane series possessing functional groups which can participate in substitution, elimination, hydrolysis, redn., and oxidn. reactions, were adsorbed on a thin layer of Al2O3 and subjected to the action of several reagents. The following were screened: methyl 3.alpha.-acetoxy-, methyl-3.beta.-acetoxy-, methyl 6.alpha.-acetoxy-, methyl 12.alpha.-acetoxy-, methyl 3.alpha.,6.alpha.-diacetoxy-, methyl 3.alpha.,12.alpha.-diacetoxy-, methyl 3.alpha.-tosyloxy-, methyl 6.alpha.-tosyloxy-, methyl 12.alpha.-tosyloxy-, methyl 3.alpha.,6.alpha.-ditosyloxy-, methyl-3-oxo-, methyl 6-oxo-, methyl 12-oxo-, methyl 3,6-dioxo-, methyl 3,12-dioxo-5.alpha.- and --------5.beta.-cholanates, resp., and also methyl 3.beta.-acetoxy-5.alpha.- and -5.beta.-etianates. Plots of Rm values of the monosubstituted methyl 5.beta.-cholanates against the position of the substituents, showed that the substituents in the 3.alpha. and 6.alpha. positions affected the adsorptivity as follows: O > OTs > OAc > Co2Me, independent of the adsorbent activity, in contrast with those at C-12, which show some inversion. The oscillation of Rm values of 12.alpha. substituted compds. around those of 3.alpha. and 6.alpha. derivs. favored the conception that the migration of a substance on the adsorbent surface is detd. by a rel. large no. of antagonistic effects. The 6.alpha.-substituted compds. were more strongly absorbed than the corresponding 3.alpha. compds. The skeleton-adsorbent-interaction effect proposed as an explanation was illustrated by means of the Rm values of the 3.alpha.- and 3.beta.-substituted methyl 5.beta.-cholanates. Also considered were the homology effect, and the steric effect which acted in opposition to the former two effects.

L7 ANSWER 14 OF 37 CAPLUS COPYRIGHT 2002 ACS
AN 1965:82825 CAPLUS
DN 62:82825
OREF 62:14773h,14774a-c
TI Steroids in the adsorbed state. I. Adsorption of certain 5.alpha.- and 5.beta.-cholanic and etianic acid derivatives on activated alumina
AU Hodosan, Francisc; Pop-Gocan, Alexandra
CS Acad. R.P.R., Cluj
SO Rev. Roumaine Chim. (1964), 9(8-9), 523-30
DT Journal
LA English
CC 42 (Steroids)
AB Steroids of medium and low polarity of the 5.alpha.- and 5.beta.-cholane series possessing functional groups which can participate in substitution, elimination, hydrolysis, redn., and oxidn. reactions, were adsorbed on a thin layer of Al2O3 and subjected to the action of several reagents. The following were screened: methyl 3.alpha.-acetoxy-, methyl-3.beta.-acetoxy-, methyl 6.alpha.-acetoxy-, methyl 12.alpha.-acetoxy-, methyl 3.alpha.,6.alpha.-diacetoxy-, methyl 3.alpha.,12.alpha.-diacetoxy-, methyl 3.alpha.-tosyloxy-, methyl 6.alpha.-tosyloxy-, methyl 12.alpha.-tosyloxy-, methyl 3.alpha.,6.alpha.-ditosyloxy-, methyl-3-oxo-, methyl 6-oxo-, methyl 12-oxo-, methyl 3,6-dioxo-, methyl 3,12-dioxo-5.alpha.- and --------5.beta.-cholanates, resp., and also methyl 3.beta.-acetoxy-5.alpha.- and -5.beta.-etianates. Plots of Rm values of the monosubstituted methyl 5.beta.-cholanates against the position of the substituents, showed that the substituents in the 3.alpha. and 6.alpha. positions affected the adsorptivity as follows: O > OTs > OAc > Co2Me, independent of the adsorbent activity, in contrast with those at C-12, which show some inversion. The oscillation of Rm values of 12.alpha. substituted compds. around those of 3.alpha. and 6.alpha. derivs. favored the conception that the migration of a substance on the adsorbent surface is detd. by a rel. large no. of antagonistic effects. The 6.alpha.-substituted compds. were more strongly absorbed than the corresponding 3.alpha. compds. The skeleton-adsorbent-interaction effect proposed as an explanation was illustrated by means of the Rm values of the 3.alpha.- and 3.beta.-substituted methyl 5.beta.-cholanates. Also considered were the homology effect, and the steric effect which acted in opposition to the former two effects.

L7 ANSWER 15 OF 37 CAPLUS COPYRIGHT 2002 ACS
AN 1965:720 CAPLUS
DN 62:720
OREF 62:110d-e
TI Mass-spectrometric study of carbohydrates: methyl ethers of disaccharides
AU Chizhov, O. S.; Polyakova, L. A.; Kochetkov, N. K.
SO Dokl. Akad. Nauk SSSR (1964), 158(3), 685-8
DT Journal
LA Russian
CC 9 (Electric and Magnetic Phenomena)
AB Mass spectra were obtained of .alpha.-Me hepta-O-methyl-gentiobioside (I), .alpha.,.beta.-Me hepta-O-methylmelibioside (II), .alpha.,.beta.-Me hepta-O-methylcellobioside (III), .alpha.,.beta.-Me hepta-O-methylmaltoside (IV), .alpha.,.beta.-Me hepta-O-methyllactoside (V), and .alpha.-Me hepta-O-methylsophoroside (VI). The more conspicuous differences between the mass spectra arise from the different positions of the O bridge, which is 1 .fwdarw. 6 in I and II, 1 .fwdarw. 4 in III, IV, and V, and 1 .fwdarw. 2 in VI. Peaks at m/e = 380 and 305 are observed in the spectra of III, IV, V, and VI only, m/e = 380 being ascribed to loss of C atoms 5 and 6 together as methoxyethanal from ring B, and m/e = 305 to the further loss of (MeO)2CH.bul.. A peak at m/e = 161 is much stronger in III, IV, and V than in VI, and is attributed to loss of the ring A radical from the m/e = 380 fragment. Peaks at m/e = 279 and 353 are thought to be analogous to the peaks at m/e = 75 and 149 in methylated glucose; m/e = 279 probably arises from cleavage in ring A, and m/e = 353, which occurs only in I and II, from ring B cleavage.

L7 ANSWER 16 OF 37 CAPLUS COPYRIGHT 2002 ACS
AN 1965:719 CAPLUS
DN 62:719
OREF 62:110b-d
TI Highly sensitive photoresistors and photocells of roasted CdS and some of their reversible aging processes
AU Kynev, St.; Stoyanov, V.; Shekerdzhiiski, V.
CS Phys. Inst., Sofia, Bulg.
SO Acta Phys. Polon. (1964), 25(3), 313-21
DT Journal
LA Russian
CC 9 (Electric and Magnetic Phenomena)
AB A method of simply and quickly prepg. CdS tablets suitable for the production of photoresistors makes use of any CdS or CdS contg. CdSO4 that can be had from Soviet industry. The prepn. involves compression of the CdS power at 100 kg./sq. cm. followed by heating in an Ar atm. at 850-900.degree. for 1/2 hr. The photosensitivity of the material is increased by Cu addn. The high-resistance photosensitive sinter obtained is used to prep. by known methods photoresistors having improved mech. stability. On exposure to light these photoresistances age, with photocurrents decreasing 5-30% for the first 100-200 working hrs., and no change thereafter (measured at 2000 hrs.). Heating an already aged photoresistance some 10 sec. restores it to its initial state, and it can be repeated 7-8 times. The theory of the reversible aging is discussed. The photoresistors capable of prepn. by methods described can be used in automatic control and measuring devices and as a result of their feeding and intensifying ability they can be used as photomultipliers. Some properties of the photoresistors are given.

L7 ANSWER 17 OF 37 CAPLUS COPYRIGHT 2002 ACS
AN 1964:404373 CAPLUS
DN 61:4373
OREF 61:702d-g
TI C-Nor-D-homosteroids and related alkaloids. II. A new alkaloid from Veratrum species, 11-deoxojervine
AU Masamune, Tadashi; Mori, Yoichi; Takasugi, Mitsuo; Mural, Akira
CS Hokkaido Univ., Sapporo, Japan
SO Tetrahedron Letters (1964), (15-16), 913-17
DT Journal
LA Unavailable
CC 42 (Steroids)
GI For diagram(s), see printed CA Issue.
AB cf. CA 58, 11437c. The ground roots of V. album var grandiflorum gave 0.08% veratramine and 0.3% new alkaloid (Ia) (R = H2, R1 = H) (I), but no jervine (Ia) (R = O, R1 = H) (II). I m. 237-8.degree., [.alpha.]D -33.2.degree. (EtOH); O,N-diacetate m. 163-4.degree. and 195-7.degree., [.alpha.]D 1.1.degree.. I was recovered on redn. with LiAlH4 or Li in liquid NH3. Catalytic redn. of jervin-11.beta.ol (Ia) (R = .beta.-OH, H, R1 = H) (III) in HOAc in the presence of Pt gave the 5,6-dihydro deriv. of Ia (R = .beta.-OH, H, R1 = Ac) (IV), m. 124-7.degree. and 189-91.degree.; O,O,N-triacetate m. 184-6.degree.. Birch redn. of III in MeOH gave V, m. 148-50.degree.. On refluxing with HCl in MeOH, III gave 35% veratramine. The CO group of II did not form an oxime. Clemmensen redn. of 12,13-dihydrojervine was unsuccessful. Wolff-Kishner redn. of II gave VI, m. 211-13.degree., [.alpha.]D +3.5.degree., and m. 236-8.degree.. VI gave an O,O,N-tri-acetate, m. 116-18.degree., [.alpha.], 46.degree.. Ultraviolet, infrared, and nuclear magnetic resonance data were used to confirm the structure of the compds.

L7 ANSWER 18 OF 37 CAPLUS COPYRIGHT 2002 ACS
AN 1964:91192 CAPLUS
DN 60:91192
OREF 60:**15967c-e**
TI A polymer-homologous series of methyl .beta.-D-glycosides from cellulose
AU Wolfrom, M. L.; Haq, S.
CS Ohio State Univ., Columbus
SO Tappi (1964), 47(4), 183-5
DT Journal
LA Unavailable
CC 43 (Carbohydrates)
AB cf. CA 51, 1601h. Polymer homologs of Me .beta.-D-glycosides with a degree of polymerization of 2, 3, 4, and 5 from cellulose were treated with Ac2O contg. 40% HBr 1-1.5 hrs. at 25.degree. and gave the corresponding bromides (I) in 56% yield, m. 182-3.degree.; 78%, m. 183-5.degree.; 72%, amorphous; 78% amorphous, resp. I were shaken in a 1:1 mixt. of CHCl3-MeOH with Drierite and Ag2O with the exclusion of light to give the following O-acetyloligosaccharides (II): Me hepta-O-acetyl-.beta.-cellobioside (III), 68%, m. 186-7.degree., [.alpha.]20D -26.9.degree. (c 5.8, all in CHCl3); Me deca-O-acetyl-.beta.-cellotrioside, 72%, m. 198-9.degree., [.alpha.]20D -25.9.degree. (c 4.7); Me trideca-O-acetyl-.beta.-cellotetraoside, 49%, m. 215-16.degree., [.alpha.]20D -25.2.degree. (c 4.5); Me undeca-O-acetyl-.beta.-cellopentaoside, 65%, m. 224-6.degree., [.alpha.]20D -24.2.degree. (c 5.6). II were refluxed 6 hrs. in MeOH with BuNH2 to give Me .beta.-cellobioside (IV), 84%, m. 192-3.degree., [.alpha.]20D -19.7.degree. (c 3.3, all in H2O); Me .beta.-cellotrioside, 93%, m. 240-2.degree., [.alpha.]20D -13.7.degree. (c 3.1); Me .beta.-cellotetraoside, 94%, m. 251-3.degree. (decompn.), [.alpha.]20D -10.degree. (c 1.4); Me .beta.-cellopentaoside, 94.5%, m. 255-8.degree. (decompn.), [.alpha.]20D -8.1.degree. (c 1.4). The x-ray powder diffraction bands and the rotatory dispersion of III and IV were detd. The optical rotatory powers of both series followed the Freudenberg relationship.

L7 ANSWER 19 OF 37 CAPLUS COPYRIGHT 2002 ACS
AN 1964:91191 CAPLUS
DN 60:91191
OREF 60:**15967b-c**
TI The applicability of Klyne's rule to the calculation of molecular rotation of alkaloid glycosides and other carbohydrates
AU Stanek, J.
CS Karlova Univ., Prague
SO Tagungsber., Deut. Akad. Landwirtschaftswiss. Berlin (1961), No. 27, 117-30
DT Journal
LA Unavailable
CC 43 (Carbohydrates)
AB Klyne's rule for the calcn. of mol. rotation was successfully applied to the following substances: the Veratrum alkaloid glycosides veratrosine, isorubijervosine, pseudojervine; the nonreducing oligosaccharides gentianose, raffinose, melezitose, their undecaacetyl derivs., and undecamethylmelezitose; Me solatrioside, Me chacotrioside, and Me lycotetraoside. Values calcd. for the Solanum alkaloid monosides did not agree well with exptl. values. 95 references.

L7 ANSWER 20 OF 37 CAPLUS COPYRIGHT 2002 ACS
AN 1964:91113 CAPLUS
DN 60:91113
OREF 60:**15944d-g**
TI The Veratrum alkaloids
AU Poethke, W.; Kuntze, M.; Kerstan, W.
CS Friedrich-Schiller Univ., Jena, Germany
SO Tagungsber., Deut. Akad. Landwirtschaftswiss. Berlin (1961), No. 27, 91-9
DT Journal
LA Unavailable
CC 42 (Steroids)
AB Esters of rubijervine, so far not found in the Veratrum species, were prepd., and the amorphous alkaloids of Veratrum album were chromatographed to give rubijervine (I), isorubijervine (II), jervine (III), and 3 unknown alkamines. I and III were each treated with the desired acid chloride in pyridine; warming of I must be avoided. Thus prepd. were I diacetate (IV), m. 161-3.degree. (decompn.) (alc.); I dipropionate, m. 217-18.degree. (decompn.) (acetone); I bis(dl-.alpha.-methylbutyrate) (V), m. 195-6.degree. (decompn.) (acetone); dipropionyljervine, m. 121.degree. (decompn.) (dil. MeOH); and bis(dl-.alpha.-methylbutyryl)jervine, m. 174-6.degree. (decompn.)(dil. MeOH). I, IV, and esp. V depressed the blood pressure of cats at doses of 0.03 mg./kg. Alk. hydrolysis of the amorphous alkaloids obtained from Veratrum album gave besides germine another amorphous fraction, which was paper-chromatographed; the following solvent systems gave partial sepns., showing the presence of I, II, III, and 2 other alkamines designated A and C: 90:10 CHCl3-dioxane; 75:25 CHCl3-MeCOEt, 90:10 or 80:20 CHCl3-C6H6, and 25:75 CH2:CHCl-EtOAc, all mixts. being satd. with HCONH2. Germine, isogermine, protoverine, zygadenine, and an alkaloid designated Alkamine B did not travel with any of these solvent systems but could be sepd. by means of 40:50:10 BuOH-H2O-AcOH. Crystn. of the hydrolyzed amorphous fraction from acetone and chromatography on an acidic Al2O3 column with CHCl3 as eluent to which increasing quantities of EtOH were added yielded a mixt. of I and II (sepd. by fractional crystn. from EtOH into I, m. 23942.degree., and II, needles m. 216-18.degree. and prisms m. 237-8.degree.), III (m. 241-3.degree.), amorphous A, and cryst. B, m. 259-62.degree. (acetone). Chromatography on HCONH2-treated silica gel with CHCl3 + 1% EtOH as eluent gave good sepns. and yielded cryst. A, C27H43O4N, m. 115-18.degree., crystd. by slow evapn. of its acetone-ether soln., as well as C, m. 215-17.degree. (acetone-ether).

L7 ANSWER 21 OF 37 CAPLUS COPYRIGHT 2002 ACS
AN 1964:91112 CAPLUS
DN 60:91112
OREF 60:**15944c-d**
TI Degradation of solasodine
AU Magyar, G.
CS Forschungsinst. Pharm. Ind., Budapest, Hung.
SO Tagungsber., Deut. Akad. Landwirtschaftswiss. Berlin (1961), No. 27, 225-7
DT Journal
LA Unavailable
CC 42 (Steroids)
AB Acetylation of solasodine (I) with Ac2O in the presence of C5H5N, quinoline, collidine, NEt3, alkali carbonates, alk. earth carbonates, Na3PO4, Na, Mg, Fe, and some ion exchange resins was investigated. Optimum results were obtained with NEt3 in the presence of an inert solvent as PhMe. The product was O,N-diacetylsolasodine (II). The conversion of II into the pseudoacetamido deriv. followed by oxidn. was effected by known methods. Subsequent pyrolytic cleavage of the 16-acyloxy side chain gave an overall yield of 58% 5,16-pregnadien-3B-ol-20-one acetate. As in the degradation of I, pregna-5,16-dien-3.beta.-ol-20one propionate and butyrate were obtained from I and 5.beta.-pregn16-en-3.beta.-ol-20-one acetate and propionate from tomatidine.

L7 ANSWER 22 OF 37 CAPLUS COPYRIGHT 2002 ACS
AN 1963:66694 CAPLUS
DN 58:66694
OREF 58:**11437c-g**
TI Structure of isojervine
AU Masamune, Tadashi; Takasugi, Mitsuo; Suzuki, Hiroshi; Kawahara, Shozo; Gohda, Masatoshi; Irie, Toshi
CS Hokkaido Univ., Sapporo
SO Bull. Chem. Soc. Japan (1962), 35, 1749-50
DT Journal
LA Unavailable
CC 42 (Steroids)
GI For diagram(s), see printed CA Issue.
AB The structure I is found to be consonant with all chem. and spectral data for isojervine, C27H39O3N, which is a secondary base with two acylable hydroxyl groups and one .alpha.,.beta.-unsatd. oxo group, p 1684, 1630, and 1063 cm.-1, .lambda. 330 m.mu. (.epsilon. 250), 252 m.mu. (inflection, .epsilon. 2900), 211 m.mu. (.epsilon. 9000). Redn. of I with Li and MeOH in NH3 at -70.degree. afforded .alpha.-dihydrojervinol. Oppenauer oxidn. of I with cyclohexanone and Al isopropoxide gave isojervone, m. 112-14.degree.; [.alpha.]d 140.degree. (EtOH), 1682, 1642, and 1620 cm.-1; .lambda. 234 m.mu. (.epsilon. 22,000). Hydrogenation of I over Pt in HOAc gave dihydroisojervine (II), m. 153-5.degree. and 171.5-2.5.degree., v 1679, 1625, and 1040 cm.-1, .lambda. 238 m.mu. (.epsilon. 9400). ppenauer oxidn. of II produced dihydroisojervone, m. 108-10.degree., v 1712, 1687, and 1629 cm.-1, .lambda. 238 m.mu. (.epsilon. 9900). Hydride redn. of I yielded isojervinol, m. 210-11.degree., .lambda. 212 m.mu. (.epsilon. 6400). The spectral data suggested a double bond at C8-C9. Birch redn. of II gave .alpha.-tetrahydroisojervine (III), m. 147-9.degree., 1731 cm.-1, and .beta.-tetrahydroisojervine (IV), m. 138-42.degree. (CHCl3 addn. compd.); v 1741 cm.-1 Neither the triacetate of III, m. 179-82.degree., nor the triacetate of IV, m. 168-8.5.degree. was identical with 22,27-imino-17(20)-jervene-3,23-diol-11-one triacetate. Treatment of II with N tert-BuOK in refluxing tert-BuOH under N 1 hr. yielded V, m. 142-4.degree., v 1670, 1621, and 1036 cm.-1, CHCl3, 1678 and 1630 cm.-1; .lambda. 239 m.mu. (.epsilon. 8600). V was a weak tertiary base; the pKa of V, I, and II were 6.12, 6.92, and 7.08 in 50% EtOH. Acctylation of V with Ac2O and C5H5N at 100.degree. 3 hrs. gave a O,O-diacetate, p (CHCl3) 1725, 1685, and 1632 cm.-1; pKa, 4.47. Similar reactions, involving migration of 13(17) double bond to .alpha.,.beta.-position of the carbonyl group followed by cyclization, were observed with III and IV.

L7 ANSWER 23 OF 37 CAPLUS COPYRIGHT 2002 ACS
AN 1963:66693 CAPLUS
DN 58:66693
OREF 58:**11436g-h,11437a-c**
TI Epimeric 2-bromo derivatives of 4,4-dimethylcholestan-3-one
AU Malunowicz, I.
CS Coll. Agr., Wroclaw, Pol.
SO Bull. Acad. Polon. Sci. Ser. Sci. Chim. (1962), 10, 311-17
DT Journal
LA English
CC 42 (Steroids)
AB Bromination of 3.39 g. 4,4-dimethylcholestan-3-one in HOAc and HBr by Br in HOAc at room temp., followed by NaBH4 redn. of the oily product in C6H6-MeOH yielded the bromohydrin, which was acetylated with Ac2O in C5H5N at room temp. and gave 2.8 g. 2.alpha.-bromo-3.beta.-acetoxy-4,4-dimethylcholestane (I), m. 169-70.degree. (EtOAc-MeOH), [.alpha.]D -17.degree.. I refluxed 24 hrs. with 5% alc. KOH yielded 2.beta.,3.beta.-epoxy-4,4-dimethylcholestane, m. 97-8.degree. (Me2CO-MeOH), [.alpha.]D 53% which was reduced by LiAlH4 in Et2O to yield the known 4,4-dimethylcholestan-3.beta.-ol. Treatment of 600 mg. I with Zn-HOAc under reflux 1 hr. gave 300 mg. 4,4-dimethylcholest-2-ene, m. 93-4.degree. (Me2CO), [.alpha.]D 29.degree., which was treated with BzOOH in CHCl3 at 0.degree. 48 hrs. to give 80% 2.alpha.,3.alpha.-epoxy-4,4-dimethylcholestane (II), m. 84-5.degree. (EtOAc-MeOH), [.alpha.]D 33.degree. which with LiAlH4 redn. yielded the known 4,4-dimethylcholestan-3.alpha.-ol. Shaking 500 mg. II with 10 ml. HBr in CHCl3 15 min. yielded 380 mg. 2.beta.-bromo-4,4-dimethylcholestan-3.alpha.-ol (III), m. 107-8.degree. (EtOAc-MeOH), [.alpha.]D) 60.degree., which with Ac2O-C5H5N at room temp. yielded the 3.alpha.-acetate, which, refluxed with alc. KOH 24 hrs. yielded II. Oxidn. of 500 mg. III in C6H6HOAc with 4.5 ml. Kiliani's mixt. at room temp. 30 min. yielded 260 mg. 2.beta.-bromo-4,4-dimethyl cholestan-3-one (IV), m. 111-12.degree. (EtOAc-MeOH), [.alpha.]D 114.degree., .gamma. 1731 cm.-1, indicative of an equatorial Br. That the Br is .beta.-orientated is shown by (1) its high specific rotation; (2) the epimerization of IV with HBr in HOAc at 27.degree. 12 hrs. to yield the 2.alpha.-bromo,4-dimethylcholestan-3-one (V), m. 73-5.degree. (EtOAc-EtOH), [.alpha.]D 12.degree., y 1734 cm.-1; (3) NaBH4 redn. of IV to yield 2.beta.-bromo-4,4-dimethylcholestan-3.beta.-ol, m. 155-6.degree. (EtOH), [.alpha.]D 33.degree., which with CrO3 yielded IV, and when refluxed with alc. KOH gave 4,4-dimethylcholestan-3-one. Ring A must therefore be in the boat form. Redn. of V with NaBH4, followed by acetylation with Ac2O-C5H5N at room temp. yielded I. Thus the stable bromo ketone is the equatorial 2.alpha.-bromo ketone with ring A in the chair conformation.

L7 ANSWER 24 OF 37 CAPLUS COPYRIGHT 2002 ACS
AN 1962:7883 CAPLUS
DN 56:7883
OREF 56:**1525h-i**
TI The alkaloids of the above-ground organs of Veratrum album. Composition of the alkaloids
AU Jaspersen-Schib, R.; Flueck, H.
CS Pharm. Inst., Zuerich, Switz.
SO Pharm, Acta Helv. (1961), 36, 461-71
DT Journal
LA English
CC 39 (Pharmaceuticals)
AB The alkaloids are sepd. by partition chromatography by using kieselguhr. The properties of the pure alkaloids, with respect to paper chromatography, were studied, and their identification in the alkaloidal exts. of V. album was then examd. by the same procedure. The presence of germine, geralbine, neogermbudine, veratroylzygadenine, and protoveratrine A and B in 1 or more of the samples was demonstrated. In all the exts. examd., 1 unknown alkaloid (alkaloid Y) was found. The most toxic exts. contained ester alkaloids. Expts. with isolated pieces of the first stomach as well as the uterus of the cow, treated with powdered leaves and solns, of five exts., showed a decrease of the contractions. A sample contg. chiefly ester alkaloids increased the contractions.

L7 ANSWER 25 OF 37 CAPLUS COPYRIGHT 2002 ACS
AN 1960:91847 CAPLUS
DN 54:91847
OREF 54:**17443g-i,17444a-e**
TI The general importance of the reaction of alkaloids of the secondary amine type with formaldehyde
AU Auterhoff, H.; Moll, F.
CS Tech. Hochschule, Braunschweig, Germany
SO Arch. Pharm. (1960), 293, 132-41
DT Journal
LA Unavailable
CC 10H (Organic Chemistry: Alkaloids)
AB The reaction of alkaloids of the secondary amine types with formaldehyde was investigated and it was assumed that this reaction was important in the biosynthesis of alkaloids. The nucleophilic strength of the alkaloids was detd. by the method of Brady and Cropper (CA 45, 8971e) with 2,4-(O2N)2C6H3Cl(I). Reaction velocity consts. of the reaction with I (k2 .times. 10-4) and consts. of the alk. dissocn. KB were detd. Cephaeline (II) (0.254 g.) treated in 50 ml. abs. Et2O with 0.10 ml. 35% HCHO 4 hrs. at room temp., and the solvent evapd., yielded 0.279 g. N-(hydroxymethyl)cephaeline (III), m. 138-142.degree., [.alpha.]20D -20.degree. (c 2, CHCl3), Rf (Partridge mixt.) 0.53. The paper chromatography showed uniformity of III, II and 35% HCHO reacted in NaOH soln. to give a mixt. of several products; dicephaelinomethane was not obtained. Coniine (IV) (contg. small amts. of .gamma.-coniceine) (0.304 g.) refluxed in 30 ml. Et2O with 0.2 ml. 35% HCHO and 0.5 g. K2CO3 30 min. yielded after evapn. of the solvent 0.270 g. N-(hydroxymethyl)coniine(V), yellow oil, n20D 1.4779, [.alpha.]20D 55.degree. (c 5.5). IV (0.272 g.) was heated with 0.032 g. paraformaldehyde and 5 mg. K2CO3 (VI) in a sealed tube 20 min. with shaking on a water bath; filtration and evapn. of Et2O yielded 0.185 g. diconiinomethane, oil, n20D 1.4852, [.alpha.]20D 49.degree., Rf 0.74. Conhydrine (VII) (0.5 g.) refluxed in 30 ml. Et2O with 0.60 ml. 35% HCHO and 1 g. VI 30 min., and the soln. evapd. after filtration yielded 0.564 g. N-(hydroxymethyl)conhydrine, yellow oil, n20D 1.4672, [.alpha.]20D 132.degree.(CHCl3), [.alpha.]20D 46.degree. (alc.), [.alpha.]20D 106.degree. (alc., after 3 days), Rf 0.64. The prepn. of diconhydrinomethane failed. Cytisine (VIII) (0.159 g.) treated 4 hrs. at room temp. with 0.075 g. 35% HCHO yielded after filtration and evapn. 0.173 g. N-(hydroxymethyl)cytisine m. 110-14.degree.. VIII (0.30 g.) treated at room temp. in 3 ml. abs. alc. with 0.147 g. 35% HCHO and 0.2 g. Ca(OH)2 12 hrs., 30 ml. Et2O and 0.1 g. VI added, and the mixt. filtered, yielded dicytisinomethane, m. 220-1.degree.. Jervine (50 mg.) in 80 ml. abs. Et2O and 0.10 ml. 35% HCHO treated 15 min. at 40.degree. yielded 54 mg. N-(hydroxymethyl)jervine, m. 168-70.degree. (decompn.). The prepn. of hydroxymethyl compds. of bornylisobornylamine and diisobornylamine failed. k2 .times. 10-4 and KB, resp., were detd. for the following compds.: piperidine, 175, 1.6 .times. 10-3(25.degree.); morpholine, 44, -; NHEt2, 2.2, 9.6 .times. 10-3(25.degree.); cephaeline, 2.9, -; emetine, 1.5, 2.3 .times. 10-7 (secondary N) (15.degree.) and 1.7 .times. 10-6 (tertiary N); coniine, 0.12, 1.3 .times. 10-3(25.degree.); conhydrine, 0.06; 2 .times. 10-4(18.degree.); jervine, about 0.04, -; diisobornylamine, about 0.002, -; theophylline, about 0.004, 1.9 .times. 10-14(25.degree.); theobromine, about 0.004, 1.3 .times. 10-14(18.degree.); yohimbine, about 0.002, 10-11 (secondary N) (23.degree.), and 2.8 .times. 10-7 (tertiary N). The following alkaloids were chromatographed on Partridge mixt. Detection was carried out with Dragendorff reagent (a), 0.2% ninhydrin in BuOH(b) and heating at 110.degree. or 1% sodium nitroprusside(c) and after treating with 10% NH4OH. The following data were obtained: IV, Rf 0.72, red-brown(a), violet(b); Rf 0.72, red-brown(a); .gamma.-coniceine, Rf 0.61, red-violet(a), red(c); VII, Rf 0.62, yellowish(a), violet(b). The influence of basicity and steric effects on the reactivity of the named

L7 ANSWER 25 OF 37 CAPLUS COPYRIGHT 2002 ACS (Continued)
alkaloids were discussed.

L7 ANSWER 26 OF 37 CAPLUS COPYRIGHT 2002 ACS
AN 1960:91846 CAPLUS
DN 54:91846
OREF 54:17443e-g
TI Synthesis of some quaternary granatanol esters of pharmacological activity
AU Matkovics, B.
CS Univ. Szeged, Hung.
SO Acta Univ. Szegediensis Acta Phys. et Chem. (1959), 5(No. 1-2), 47-52
DT Journal
LA English
CC 10H (Organic Chemistry: Alkaloids)
AB Pseudopelletierine was reduced to 3.beta.-granatanol (I), m. 99-100.degree. (picrate m. 264-5.degree.), by the method of Ciamician and Silber [Ber. 25, 1062(1892)] and to 3.alpha.-granatanol (II), hygroscopic [picrate 275-6.degree. (MeOH)], by the method of Alder and Dortmann (CA 49, 3984h). The granatanol obtained was extd. from benzene, the soln. dried over MgSO4, evapd. and distd. under reduced pressure. Recrystn. from a mixt. 2:4 anhyd. benzene-petr. ether gave a very pure alc. O-Acetyl-3.beta.-granatanol (III) b9 135-50.degree. (picrate m. 201.degree.), and O-acetyl-3.alpha.-granatanol (IV), b10 172-90.degree. (picrate m. 204.degree.), were prepd. by distn. of the corresponding alc. with glacial HOAc under reduced pressure. The following quaternary derivs. were also prepd.: N,N-di-Me deriv. of IV, m. 329.degree.; N-Me, N-Et deriv. of IV, m. 337.5.degree.; N-Me, N-Pr deriv. of IV, m. 240.degree.; N,N-di-Me deriv. of III, m. 331.degree.; N-Me, N-Et deriv. of III, m. 289.5.degree.; N-Me, N-Pr deriv. of III, m. 290.degree..

L7 ANSWER 27 OF 37 CAPLUS COPYRIGHT 2002 ACS
AN 1960:64687 CAPLUS
DN 54:64687
OREF 54:12490d-e
TI Oscillopolarographic characteristic of veratrum alkaloids
AU Molnar, Ladislav; Molnarova, Klara
CS Inst. Chem., Bratislava, Czech.
SO Acta Polon. Pharm. (1960), 17, 1-6
DT Journal
LA English
CC 17 (Pharmaceuticals, Cosmetics, and Perfumes)
AB The oscillograms of jervine, pseudojervine, veratridine, protoveratrine A and B, germine, germerine, cevine, protocevine, rubijervine, and isorubijervine are reproduced and discussed. Sufficient differentiation enables particular compds. to be identified and the sapon. rate of the esters detd. All detns. were made in 1-2N NaOH, LiOH, or LiCl.

L7 ANSWER 28 OF 37 CAPLUS COPYRIGHT 2002 ACS
AN 1960:64686 CAPLUS
DN 54:64686
OREF 54:12490c-d
TI Determination of solanum alkaloids
AU Rozsa, Pal
SO Gyogyszeresz (1955), 10, 6-8
From: C.Z. 1958, 4569.
DT Journal
LA Unavailable
CC 17 (Pharmaceuticals, Cosmetics, and Perfumes)
AB Tropic acid (I) was detd. colorimetrically in I-contg. solanum alkaloids with p-dimethylaminobenzaldehyde in 50% H2SO4. For purification of the extd. soln., active charcoal was used. The soln. was made alk. with NH3, and extd. with CHCl3. The alkaloids can be extd. from the CHCl3 with dil. acid. The alkaloid content of atropine tablets and injections, as well as leaves and galenical prepns. was detd.

L7 ANSWER 29 OF 37 CAPLUS COPYRIGHT 2002 ACS
AN 1958:89905 CAPLUS
DN 52:89905
OREF 52:15833e-g
TI Oscillopolarographic characterization of veratrum alkaloids
AU Molnar, L.; Molnarova, K.
CS Chem. ustav, Slovenska akad. vied, Bratislava, Czech.
SO Chem. zvesti (1958), 12, 287-303
DT Journal
LA German
CC 17 (Pharmaceuticals, Cosmetics, and Perfumes)
AB An oscillopolarographic method (I) for the detn. of Veratrum alkaloids (glucoalkaloids, esters, and alkamines) (II) in various electrolytes on current and drop electrode and on the 1st curve is described. Jervine, rubijervine, and isorubijervine in the presence of each other were detd. qualitatively by I. I is a good method for the evaluation of the rate of sapon. of II and the rate of veratridine sapon. in 2N NaOH is shown. The type of alkamine component of veratridine, germerine, and protoveratridine can be detd. by oscillograms which show that the cuts developed after hydrolysis in every case agree in the shape and the position with the cuts of corresponding alkamines.

L7 ANSWER 30 OF 37 CAPLUS COPYRIGHT 2002 ACS
AN 1958:89904 CAPLUS
DN 52:89904
OREF 52:15833e
TI Erythromycin
AU Anon.
SO Ann. pharm. franc. (1958), 16, 72-7
DT Journal
LA Unavailable
CC 17 (Pharmaceuticals, Cosmetics, and Perfumes)
AB Unavailable

L7 ANSWER 31 OF 37 CAPLUS COPYRIGHT 2002 ACS
AN 1958:89903 CAPLUS
DN 52:89903
OREF 52:15833d-e
TI Pro pharmacopeia. Streptomycin
AU Anon.
SO Ann. pharm. franc. (1958), 16, 66-72
DT Journal
LA Unavailable
CC 17 (Pharmaceuticals, Cosmetics, and Perfumes)
AB Description, method of assay, and handling of streptomycin as proposed for incorporation in the French pharmacopeia.

L7 ANSWER 32 OF 37 CAPLUS COPYRIGHT 2002 ACS
AN 1958:79226 CAPLUS
DN 52:79226
OREF 52:14078f-h
TI Trichloroacetates of several alkaloids
AU Poethke, W.; Kuntze, Martin
CS Friedrich Schiller Univ., Jena, Germany
SO Pharm. Zentralhalle (1957), 96, 463-6
DT Journal
LA Unavailable
CC 17 (Pharmaceuticals, Cosmetics, and Perfumes)
AB The singular behavior of jervine trichloroacetate, which evolves CCl3CO2H (I) on melting or on long heating at 100.degree., occasioned the examn. of several other alkaloid trichloroacetates (II). Ephedrine (III) (0.5 g.) and 0.6 g. I dissolved in 4 ml. water by heating, cooled, rubbed, and the ppt. recrystd. from a small amt. of hot water gave III salt of I, m. 118-24.degree. (with considerable swelling). Similarly were prepd. the following salts of I d,l-III, m. 118-24.degree. (with considerable swelling); quinine di-I, m. 116-20.degree. (unsharp); brucine, m. 131-4.degree. (unsharp); strychnine (IV), m. 281-3.degree. (m.p. of IV since I was evolved between 250-60.degree.). Cond. measurements established that the II were strong electrolytes and true salts.

L7 ANSWER 33 OF 37 CAPLUS COPYRIGHT 2002 ACS
AN 1958:79225 CAPLUS
DN 52:79225
OREF 52:**14078e-f**
TI Methylnaphthoquinone and methylnaphthoquinone sodium bisulfite (vitamin K)
AU Hahn, I.; Scheunert, A.; Seel, H.
CS Anstalt Vitaminforsch. Vitaminprufung, Potsdam-Rehbrucke, Germany
SO Pharm. Zentralhalle (1956), 95, 138-43
DT Journal
LA Unavailable
CC 17 (Pharmaceuticals, Cosmetics, and Perfumes)
AB A description of menadione and menadione Na bisulfite as they will appear in a supplement to the German pharmacopeia (D.A.-B. VI). Most of the data correspond to those in U.S.P. XV, but in addn. color tests are described.

L7 ANSWER 34 OF 37 CAPLUS COPYRIGHT 2002 ACS
AN 1957:40885 CAPLUS
DN 51:40885
OREF 51:**7655d-f**
TI Alkaloids in Veratrum album var. lobelianum. I. Isolation and separation
AU Tomko, J.; Dvorakova, B.; Bauer, S.; Mokry, J.
CS Chem. ustav, Slovenska Akad. Vied, Bratislava, Czech.
SO Chem. zvesti (1956), 10, 642-8
DT Journal
LA German
CC 17 (Pharmaceuticals, Cosmetics, and Perfumes)
AB The total alkaloids in V. album var. lobelianum, found in eastern Slovakia on "Cerhovske pohor.acte.i" were detd. by gravimetric method and found to be 1.39-1.53%. From alkamines by the C6H6 extn. jervine, m. 247-8.degree., [.alpha.]D22.degree. = -150 .+-. 3.degree., was isolated. From glucoalkaloids by EtOH extn. after C6H6 extn. pseudojervine, m. 293-304.degree., [.alpha.]D22.degree. = -132 .+-. 3.degree., was isolated.

L7 ANSWER 35 OF 37 CAPLUS COPYRIGHT 2002 ACS
AN 1957:40884 CAPLUS
DN 51:40884
OREF 51:**7655c-d**
TI Enrichment of corn-steep liquor and molasses by the biomass and the metabolic products of lactobacillus in the formation of chlortetracycline
AU Belik, E.; Zelinka, J.
CS Vyskumny ustav antibiotik, Roztoky, Czech.
SO Chem. zvesti (1956), 10, 593-8
DT Journal
LA German
CC 17 (Pharmaceuticals, Cosmetics, and Perfumes)
AB By lab. fermentation the production of chlortetracycline (I) was increased maximally by 10% and 18%, if corn-steep liquor (II) and molasses (III) were fermented completely by the inoculation of Lactobacillus dellbriickii S-54. If the ratio of II to III was 2:5 the production of I was increased from 1200 .gamma./ml. to 1600-1700 .gamma./ml.

L7 ANSWER 36 OF 37 CAPLUS COPYRIGHT 2002 ACS
AN 1957:25595 CAPLUS
DN 51:25595
OREF 51:**5101i,5102a-b**
TI Initial study of the structure of a new antibiotic, congocidine
AU Julia, Marc; Joseph, Nicole
SO Compt. rend. (1956), 243, 961-4
DT Journal
LA Unavailable
CC 10 (Organic Chemistry)
AB Congocidine (I) is progressively degraded in base to C15H2003N6 (II), NH3, and glycocyamidine (III). Further hydrolysis of II gave C15H1904N5 (IV) and NH3. More drastic degradation of IV gave C12H1403N4 (V) and .beta.-alanine. Thus, I was given the formula C18H2603N10; HCl salt, m. 228.degree.; H2SO4 salt, m. 288.degree.; methyl orange salt, m. 224.degree.; picrate, m. 273.degree.. I in N NaOH at 20.degree. evolved NH3 and solid II, m. 263.degree.; picrate, m. 242.degree.; benzoate, m. 265.degree.. The filtrate was neutralized to give III; picrate, m. 218.degree.; HCl salt, m. 210.degree.. II in boiling N NaOH evolved NH3 and the solid IV sepd. as the monohydrate, m. 167.degree.; picrate, m. 250.degree.. If IV were boiled in 10N NaOH 2.5 hrs., then acidified with H2SO4, V.H2SO4, m. 240.degree., was obtained. .beta.-Alanine was also found in the mixt.

L7 ANSWER 37 OF 37 CAPLUS COPYRIGHT 2002 ACS
AN 1957:25594 CAPLUS
DN 51:25594
OREF 51:5100g-i,5101a-i
TI Jervine. X. Quaternary dihydro-1,3-oxazine salts as intermediates in the jervisine rearrangement
AU Wintersteiner, O. P.; Moore, M. L.
CS Squibb Inst. for Med. Research, New Brunswick, NJ
SO J. Am. Chem. Soc. (1956), 78, 6193-9
DT Journal
LA Unavailable
CC 10 (Organic Chemistry)
GI For diagram(s), see printed CA Issue.
AB cf. C.A. 50, 13057g. N-Acetyljervine (4.88 g.) in 125 cc. abs. MeOH satd. at 0.degree. with gaseous HCl kept 1 hr. at room temp. and evapd. to dryness in vacuo, the residue distributed between 500 cc. CHCl3 and 300 cc. H2O, the aq. layer extd. with 75 cc. CHCl3, the combined CHCl3 exts. washed with N HCl, aq. Na2CO3, and H2O, dried, and evapd. to dryness, and the residue (2.8 g.) recrystd. from MeOH-EtOAc yielded 1.56 g. N-acetylisojervine, m. 203-4.degree. (all m.ps. are cor.); the fine cryst. ppt. which had appeared in the aq. phase filtered and washed with cold H2O gave 1.65 g. quaternary chloride (I) (R = H and X = Cl) (II), m. 244-6.degree.; 2nd crop, m. 246-50.degree., 381 mg. II in AcOH ozonized, dild. with H2O, and distd., and the distillate treated with alc. dimedon gave only a few mg. trimeric self-condensation product of dimedon, m. 175-7.degree.. II (50 mg.) in 5 cc. MeOH treated at room temp. dropwise with 6 cc. 2N Na2CO3, dild. with 30 cc. H2O, and extd. with Et2O, and the ext. worked up yielded 32 mg. jervisine 17-monoacetate, platelets, m. 250-3.degree. (from Me2CO-Et2O-pentane), [.alpha.]D22 -134.degree. (c 0.861, CHCl3). II (1.64 g.) in 150 cc. warm EtOH dild. with 12 cc. H2O, the soln. cooled, added to 960 mg. prereduced PtO2 in 10 cc. EtOH, and hydrogenated 70 min., the cryst. ppt. dissolved by adding 150 cc. H2O with slight warming, the soln. filtered from the catalyst and concd. in vacuo to a small vol., and the ppt. isolated by centrifuging gave 989 mg. HCl salt (III) of the tertiary base (IV) of II, m. 312-13.degree. (sometimes up to 320.degree.), [.alpha.]D25 -69.degree. (c 0.401, 80% EtOH). III (316 mg.) in 50 cc. MeOH and 20 cc. H2O treated with excess aq. NaHCO3 with stirring and the product isolated with CHCl3 yielded 212 mg. IV.0.5H2O, square platelets, m. 154-9.degree., [.alpha.]D25 -80.degree. (c 0.524, CHCl3). III treated with N KOH in MeOH at room temp. or reflux (3 hrs.) gave IV. III refluxed 2 hrs. with 3:1:1 EtOH-H2O-concd. HCl or refluxed 4 hrs. with 1% 2,4-(O2N)2C6H3NHNH2 in 1% HCl was recovered unchanged. IV (48 mg.) in 2.5 cc. 10% AcOH refluxed 3 hrs. with an equal vol. concd. HCl, basified, and extd. with CHCl3 yielded 24 mg. unchanged IV, m. 148-53.degree.. IV treated with Ac2O-pyridine gave IV 3,23-diacetate (V), clusters of needles, m. 201-2.degree. (from aq. and then abs. MeOH), [.alpha.]D25 -77.degree. (c 0.826). V treated 18 hrs. at room temp. with 5% KOH in MeOH yielded IV.0.5H2O. V in Et2O treated with HCl in Et2O gave V.H Cl, m. 247-52.degree. (from aq. MeOH). V in EtOH treated with 5N HCl and the EtOH boiled off quickly gave O-deacetylated III.2H2O. IV (42 mg.) treated with 2 cc. HClO4-contg. acetolysis reagent and the ppt. centrifuged after short standing and washed with EtOH gave V.HClO4, m. 281-3.degree. (from MeOH), [.alpha.]D23 -60.degree. (c 0.443, 80% EtOH). I (R = Ac, X = ClO4) (192 mg.) in 30 cc. 93% EtOH hydrogenated over 123 mg. prereduced PtO2 until 1.3 mole equivs. H had been absorbed gave V.HClO4, m. 265-7.degree., which decompd. with NaHCO3 yielded V. V (201 mg.) in 7 cc. Ac2O, 3 cc. AcOH, and 0.1 cc. concd. H2SO4 kept 46 hrs. at room temp., the soln. cooled, basified weakly with NaHCO3, and extd. with CHCl3, and the aq. phase distd. (1/3) into 25 cc. 2,4-(O2N)2C6H3NHNH2 reagent yielded 10 mg. 2,4-(O2N)2C6H3NHN:CHMe, m. 158-60.degree. (from abs. EtOH); the CHCl3 exts. washed, dried, and evapd., and the yellow resinous residue (152 mg.) dissolved in C6H6 and chromatographed gave 21 mg. V and then 11-oxoveratramine 3,23-diacetate (VI), needles, m. 238-40.5.degree. (from EtOAc), [.alpha.]D23 -113.degree. (c 0.586, CHCl3). VI (15 mg.) treated with Ac2O-pyridine gave the N-Ac deriv., m. 242-4.degree., [.alpha.]D24 -27.degree. (c 0.481, CHCl3). VI (2.0 g.) in 28 cc. Ac2O, 12 cc. AcOH, and 0.2 cc. concd. H2SO4 kept 17 hrs. at room temp., poured into H2O and crushed ice, basified slightly with NaHCO3, and extd. with CHCl3, and the residue (1.81 g.) from the ext. chromatographed from C6H6 on 50 g. Al2O3 gave after small amts. of unidentified material over 1 g. of solid which triturated with MeOH yielded 30 mg. VII (R = Ac) (VIIa), m. 208-9.degree. (decompn.) (from MeOH). VIIa (4.8 mg.) in 1 cc. EtOH and 1 cc. N HCl refluxed 4 hrs., cooled, and treated with excess BaCl2 gave 1.60 mg. BaSO4. VIIa (2.10 mg.) in 5 cc. EtOH contg. a small drop of 5% alc. KOH showed after 1 hr. an absorption max. at 250 m.mu.. Further elution of the chromatographic column with MeOH and lyophilizing of the eluate gave Na salt (VIII) of VIIa. VIII (314 mg.) in 60 cc. 1:1:1 EtOH-H2O-20% HCl refluxed 1 hr., brought to pH 8 with Na2CO3, washed with CHCl3, reacidified, and treated with BaCl2 gave 86 mg. BaSO4; the residue (248 mg.) from the CHCl3 washing treated with Ac2O-pyridine yielded 214 mg. product which chromatographed on Al2O3 yielded 100 mg. stereoisomer of diacetyljervine, m. 226-30.degree. (from aq. EtOH), [.alpha.]D24 1.degree. (c 0.830, CHCl3).

```
=> FIL STNGUIDE
COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                       ENTRY    SESSION
FULL ESTIMATED COST                                    129.17     393.00

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)          SINCE FILE      TOTAL
                                                       ENTRY    SESSION
CA SUBSCRIBER PRICE                                    -22.30     -30.97

FILE 'STNGUIDE' ENTERED AT 16:52:44 ON 24 JUN 2002
USE IS SUBJECT TO THE TERMS OF YOUR CUSTOMER AGREEMENT
COPYRIGHT (C) 2002 AMERICAN CHEMICAL SOCIETY, JAPAN SCIENCE
AND TECHNOLOGY CORPORATION, AND FACHINFORMATIONSZENTRUM KARLSRUHE

FILE CONTAINS CURRENT INFORMATION.
LAST RELOADED: Jun 21, 2002 (20020621/UP).

=> d his

     (FILE 'HOME' ENTERED AT 16:38:01 ON 24 JUN 2002)

     FILE 'REGISTRY' ENTERED AT 16:38:05 ON 24 JUN 2002
L1              STRUCTURE UPLOADED
L2            6 S L1
L3           88 S L1 FULL

     FILE 'CAPLUS' ENTERED AT 16:39:07 ON 24 JUN 2002
L4           14 S L3/THU

     FILE 'USPATFULL' ENTERED AT 16:45:20 ON 24 JUN 2002
L5            9 S L3

     FILE 'CAOLD' ENTERED AT 16:47:52 ON 24 JUN 2002
                S L1

     FILE 'REGISTRY' ENTERED AT 16:48:01 ON 24 JUN 2002

     FILE 'CAOLD' ENTERED AT 16:48:03 ON 24 JUN 2002
L6           20 S L3
                SEL AN 1-

     FILE 'CAPLUS' ENTERED AT 16:48:34 ON 24 JUN 2002
L7           37 S E1-E20/OREF

     FILE 'STNGUIDE' ENTERED AT 16:52:44 ON 24 JUN 2002

=> file caplus
COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                       ENTRY    SESSION
FULL ESTIMATED COST                                      1.38     394.38

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)          SINCE FILE      TOTAL
                                                       ENTRY    SESSION
CA SUBSCRIBER PRICE                                      0.00     -30.97

FILE 'CAPLUS' ENTERED AT 17:06:24 ON 24 JUN 2002
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
```

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

FILE COVERS 1907 - 24 Jun 2002 VOL 136 ISS 26
FILE LAST UPDATED: 21 Jun 2002 (20020621/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

CAS roles have been modified effective December 16, 2001. Please check your SDI profiles to see if they need to be revised. For information on CAS roles, enter HELP ROLES at an arrow prompt or use the CAS Roles thesaurus (/RL field) in this file.

```
=> s l3/uses
           117 L3
       4571608 USES/RL
L8           15 L3/USES
                (L3 (L) USES/RL)

=> s l8 not l4
L9            1 L8 NOT L4

=> d ibib ab hitstr
```

L9 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2002 ACS

ACCESSION NUMBER: 1994:695050 CAPLUS
DOCUMENT NUMBER: 121:295050
TITLE: Biological activity of some alkaloids in feeding process of larvae and adults of the Colorado potato beetle
AUTHOR(S): Winiecki, Zbigniew; Proska, Bohumil; Voticky, Zdeno; Nawrot, Jan; Harmatha, Juraj
CORPORATE SOURCE: Inst. Ochrony Roslin, Poznan, 60-318, Pol.
SOURCE: Mater. Ses. Nauk. Inst. Ochr. Rosl. (Poznan) (1993), 33(2), 52-6
CODEN: MSNRDS; ISSN: 0208-4414
DOCUMENT TYPE: Journal
LANGUAGE: Polish

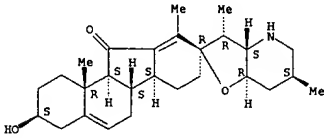
AB The antifeedant and toxic properties of 21 alkaloids against larvae and adults of the Colorado potato beetle were tested. Six compds. appeared good feeding deterrent for beetles, three compds. were simultaneously antifeedants and insecticides. Veratrine was the most active compd.

IT **469-59-0**, Jervine **36069-05-3**, Pseudojervine
RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BIOL (Biological study); **USES (Uses)**
(antifeedant and toxic activity of some alkaloids in larvae and adults of the Colorado potato beetle)

RN 469-59-0 CAPLUS

CN Spiro[9H-benzo[a]fluorene-9,2'(3'H)-furo[3,2-b]pyridin]-11(1H)-one, 2,3,3'a,4,4',5',6,6',6a,6b,7,7',7'a,8,11a,11b-hexadecahydro-3-hydroxy-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.

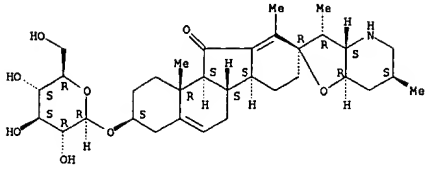


RN 36069-05-3 CAPLUS

CN Spiro[9H-benzo[a]fluorene-9,2'(3'H)-furo[3,2-b]pyridin]-11(1H)-one, 3-(.beta.-D-glucopyranosyloxy)-2,3,3'a,4,4',5',6,6',6a,6b,7,7',7'a,8,11a,11b-hexadecahydro-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L9 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2002 ACS (Continued)



```
=> d his

     (FILE 'HOME' ENTERED AT 16:38:01 ON 24 JUN 2002)

     FILE 'REGISTRY' ENTERED AT 16:38:05 ON 24 JUN 2002
L1             STRUCTURE UPLOADED
L2               6 S L1
L3              88 S L1 FULL

     FILE 'CAPLUS' ENTERED AT 16:39:07 ON 24 JUN 2002
L4              14 S L3/THU

     FILE 'USPATFULL' ENTERED AT 16:45:20 ON 24 JUN 2002
L5               9 S L3

     FILE 'CAOLD' ENTERED AT 16:47:52 ON 24 JUN 2002
                 S L1

     FILE 'REGISTRY' ENTERED AT 16:48:01 ON 24 JUN 2002

     FILE 'CAOLD' ENTERED AT 16:48:03 ON 24 JUN 2002
L6              20 S L3
                   SEL AN 1-

     FILE 'CAPLUS' ENTERED AT 16:48:34 ON 24 JUN 2002
L7              37 S E1-E20/OREF

     FILE 'STNGUIDE' ENTERED AT 16:52:44 ON 24 JUN 2002

     FILE 'CAPLUS' ENTERED AT 17:06:24 ON 24 JUN 2002
L8              15 S L3/USES
L9               1 S L8 NOT L4
```

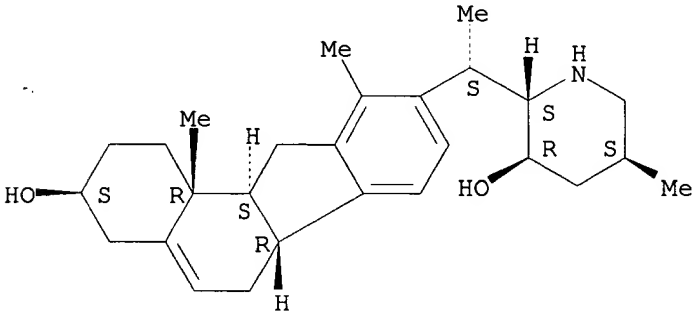
pct32399

=> s veratramine/cn
L1 1 VERATRAMINE/CN

=> d scan

L1 1 ANSWERS REGISTRY COPYRIGHT 2002 ACS
IN 3-Piperidinol, 5-methyl-2-[(1S)-1-[(3S,6aR,11aS,11bR)-2,3,4,6,6a,11,11a,11b-octahydro-3-hydroxy-10,11b-dimethyl-1H-benzo[a]fluoren-9-yl]ethyl]-, (2S,3R,5S)- (9CI)
MF C27 H39 N O2
CI COM

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

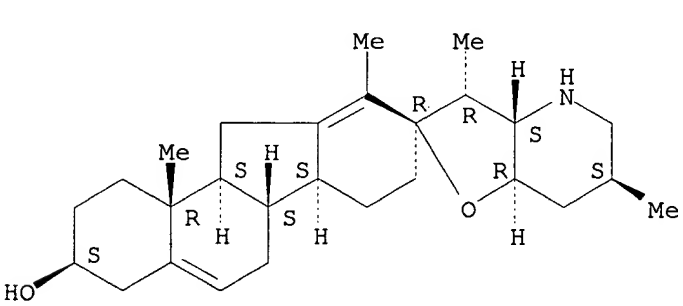
ALL ANSWERS HAVE BEEN SCANNED

=> s cyclopamine/cn
L2 1 CYCLOPAMINE/CN

=> d scan

L2 1 ANSWERS REGISTRY COPYRIGHT 2002 ACS
IN Spiro[9H-benzo[a]fluorene-9,2'(3'H)-furo[3,2-b]pyridin]-3-ol, 1,2,3,3'a,4,4',5',6,6',6a,6b,7,7',7'a,8,11,11a,11b-octadecahydro-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)-(9CI)
MF C27 H41 N O2

Absolute stereochemistry.



pct32399

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

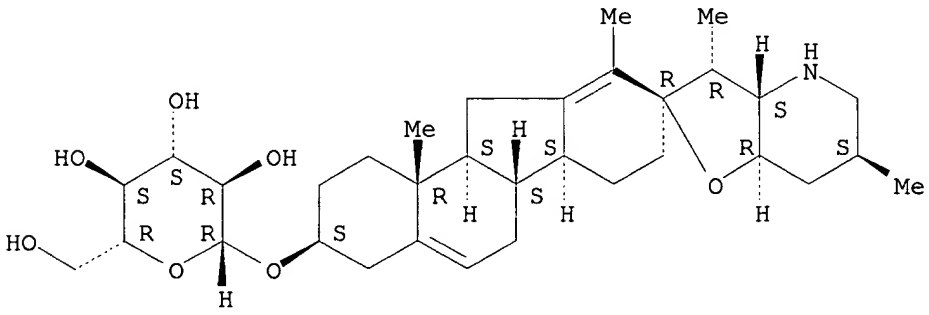
ALL ANSWERS HAVE BEEN SCANNED

=> s cycloposine/cn
L3 1 CYCLOPOSINE/CN

=> d scan

L3 1 ANSWERS REGISTRY COPYRIGHT 2002 ACS
IN .beta.-D-Glucopyranoside, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)-1,2,3,3'a,4,4',5',6,6',6a,6b,7,7',7'a,8,11,11a,11b-octadecahydro-3',6',10,11b-tetramethylspiro[9H-benzo[a]fluorene-9,2'(3'H)-furo[3,2-b]pyridin]-3-yl (9CI)
MF C33 H51 N O7

Absolute stereochemistry. Rotation (-).



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

ALL ANSWERS HAVE BEEN SCANNED

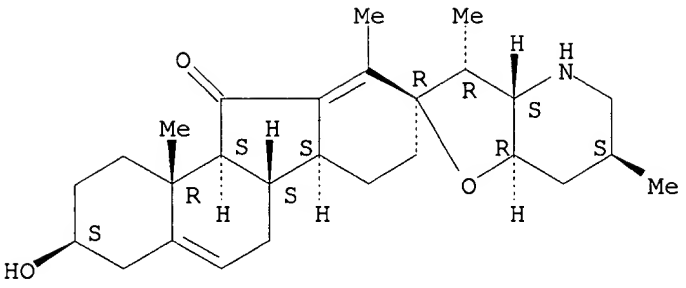
=> s jervine/cn
L4 1 JERVINE/CN

=> d scan

L4 1 ANSWERS REGISTRY COPYRIGHT 2002 ACS
IN Spiro[9H-benzo[a]fluorene-9,2'(3'H)-furo[3,2-b]pyridin]-11(1H)-one, 2,3,3'a,4,4',5',6,6',6a,6b,7,7',7'a,8,11a,11b-hexadecahydro-3-hydroxy-3',6',10,11b-tetramethyl-, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)-(9CI)
MF C27 H39 N O3
CI COM

Absolute stereochemistry.

pct32399



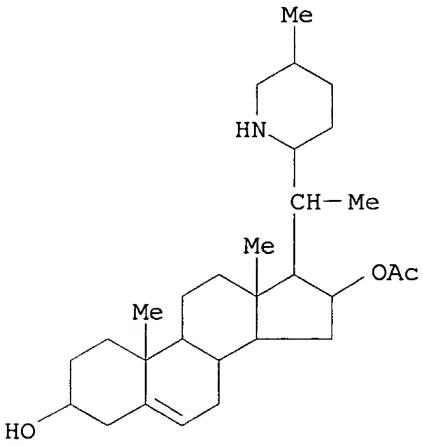
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

ALL ANSWERS HAVE BEEN SCANNED

=> s muldamine/cn
L5 1 MULDAMINE/CN

=> d scan

L5 1 ANSWERS REGISTRY COPYRIGHT 2002 ACS
IN Pregn-5-ene-3,16-diol, 20-[(2S,5S)-5-methyl-2-piperidinyl]-, 16-acetate, (3.beta.,16.alpha.,20S)- (9CI)
MF C29 H47 N O3



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

ALL ANSWERS HAVE BEEN SCANNED

=> s mukiamine/cn
L6 0 MUKIAMINE/CN

pct32399

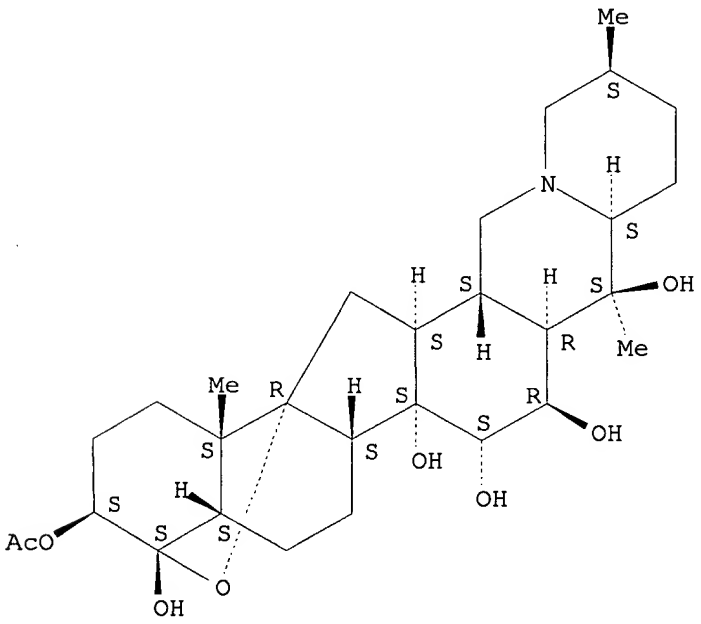
=> del l6 y

=> s zygacine/cn
L6 1 ZYGACINE/CN

=> d scan

L6 1 ANSWERS REGISTRY COPYRIGHT 2002 ACS
IN Cevane-3,4,14,15,16,20-hexol, 4,9-epoxy-, 3-acetate, (3.beta.,4.alpha.,15.alpha.,16.beta.)- (9CI)
MF C29 H45 N O8

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

ALL ANSWERS HAVE BEEN SCANNED

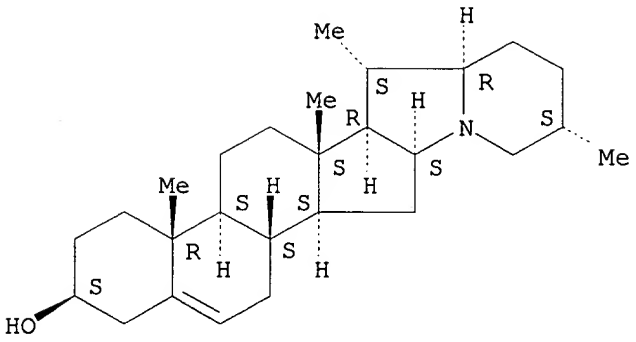
=> s solanidine/cn
L7 1 SOLANIDINE/CN

=> d scan

L7 1 ANSWERS REGISTRY COPYRIGHT 2002 ACS
IN Solanid-5-en-3-ol, (3.beta.)- (9CI)
MF C27 H43 N O
CI COM

Absolute stereochemistry.

pct32399



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

ALL ANSWERS HAVE BEEN SCANNED

=> s solanine/cn
L8 1 SOLANINE/CN

=> d scan

L8 1 ANSWERS REGISTRY COPYRIGHT 2002 ACS
IN **Solanine (9CI)**
MF Unspecified
CI COM, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

ALL ANSWERS HAVE BEEN SCANNED

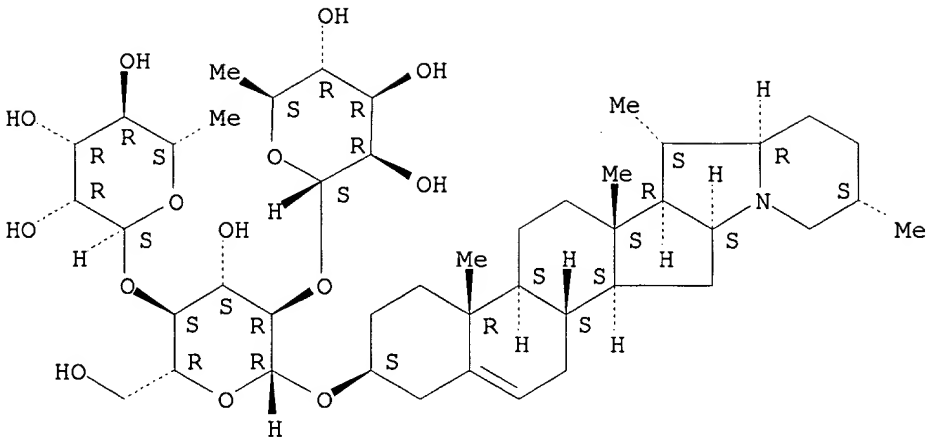
=> s chaconine/cn
L9 1 CHACONINE/CN

=> d scan

L9 1 ANSWERS REGISTRY COPYRIGHT 2002 ACS
IN .beta.-D-Glucopyranoside, (3.beta.)-solanid-5-en-3-yl O-6-deoxy-.alpha.-L-mannopyranosyl-(1.fwdarw.2)-O-[6-deoxy-.alpha.-L-mannopyranosyl-(1.fwdarw.4)]- (9CI)
MF C45 H73 N O14
CI COM

Absolute stereochemistry.

pct32399



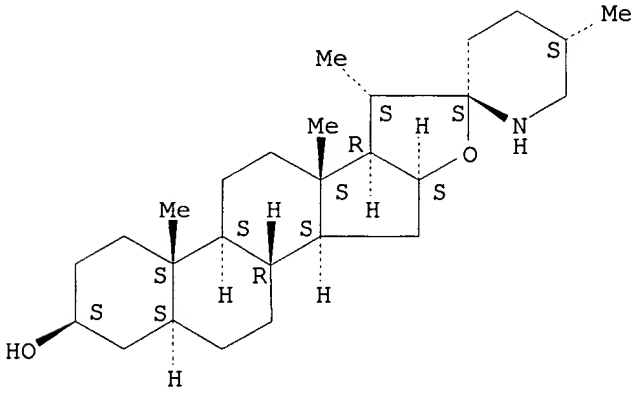
ALL ANSWERS HAVE BEEN SCANNED

=> s tomatidine/cn
L10 1 TOMATIDINE/CN

=> d scan

L10 1 ANSWERS REGISTRY COPYRIGHT 2002 ACS
IN Spirosolan-3-ol, (3.beta.,5.alpha.,22.beta.,25S)- (9CI)
MF C27 H45 N O2
CI COM

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

ALL ANSWERS HAVE BEEN SCANNED

=> s verticine/xn
'XN' IS NOT A VALID FIELD CODE
L11 0 VERTICINE/XN

pct32399

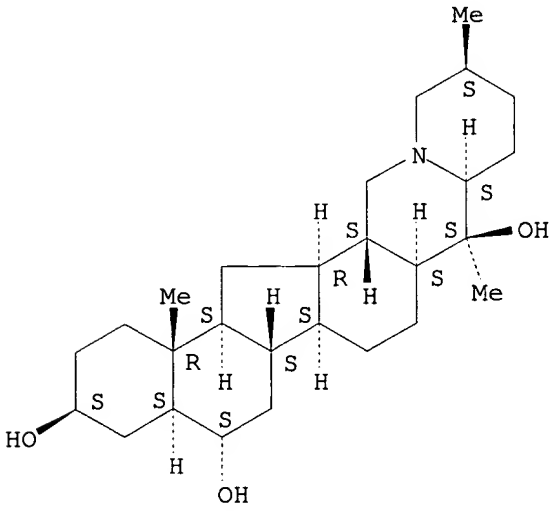
=> del l11 y

=> s verticine/cn
L11 1 VERTICINE/CN

=> d scan

L11 1 ANSWERS REGISTRY COPYRIGHT 2002 ACS
IN Cevane-3,6,20-triol, (3.beta.,5.alpha.,6.alpha.)- (9CI)
MF C27 H45 N O3
CI COM

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

ALL ANSWERS HAVE BEEN SCANNED

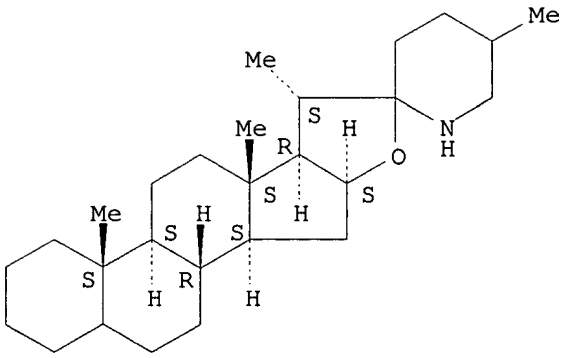
=> s spirosolane/cn
L12 1 SPIROSOLANE/CN

=> d scan

L12 1 ANSWERS REGISTRY COPYRIGHT 2002 ACS
IN **Spirosolane (9CI)**
MF C27 H45 N O

Absolute stereochemistry.

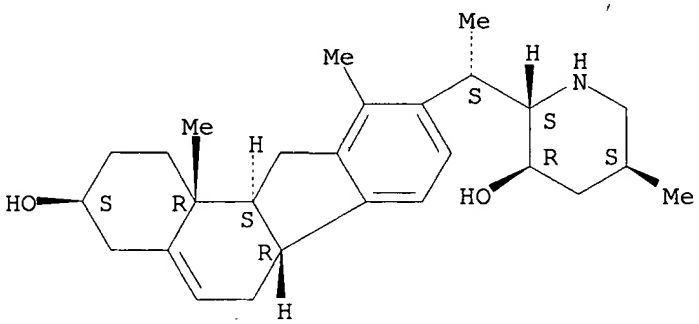
pct32399



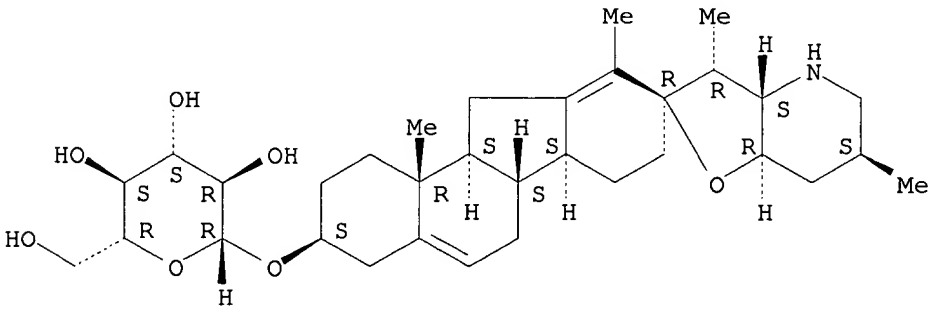
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

ALL ANSWERS HAVE BEEN SCANNED

```
=> s veratramine/cn
L2            1 VERATRAMINE/CN

=> d scan

L2    1 ANSWERS   REGISTRY  COPYRIGHT 2002 ACS
IN    3-Piperidinol, 5-methyl-2-[(1S)-1-[(3S,6aR,11aS,11bR)-
      2,3,4,6,6a,11,11a,11b-octahydro-3-hydroxy-10,11b-dimethyl-1H-
      benzo[a]fluoren-9-yl]ethyl]-, (2S,3R,5S)- (9CI)
MF    C27 H39 N O2
CI    COM

Absolute stereochemistry.
```




```
**PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT**


ALL ANSWERS HAVE BEEN SCANNED


=> s cycloposine/cn
L3            1 CYCLOPOSINE/CN

=> d scan

L3    1 ANSWERS   REGISTRY  COPYRIGHT 2002 ACS
IN    .beta.-D-Glucopyranoside, (2'R,3S,3'R,3'aS,6'S,6aS,6bS,7'aR,11aS,11bR)-
      1,2,3,3'a,4,4',5',6,6',6a,6b,7,7',7'a,8,11,11a,11b-octadecahydro-
      3',6',10,11b-tetramethylspiro[9H-benzo[a]fluorene-9,2'(3'H)-furo[3,2-
      b]pyridin]-3-yl (9CI)
MF    C33 H51 N O7

Absolute stereochemistry.  Rotation (-).
```



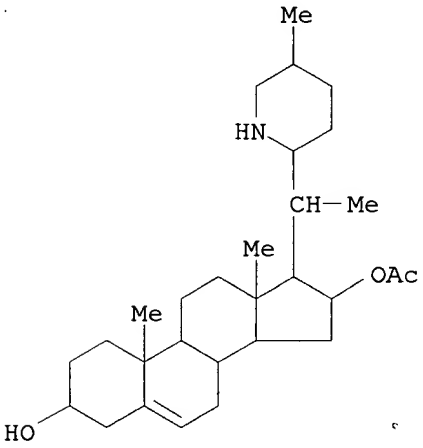
PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

ALL ANSWERS HAVE BEEN SCANNED

=> s muldamine/cn
L4 1 MULDAMINE/CN

=> d scan

L4 1 ANSWERS REGISTRY COPYRIGHT 2002 ACS
IN Pregn-5-ene-3,16-diol, 20-[(2S,5S)-5-methyl-2-piperidinyl]-, 16-acetate, (3.beta.,16.alpha.,20S)- (9CI)
MF C29 H47 N O3



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

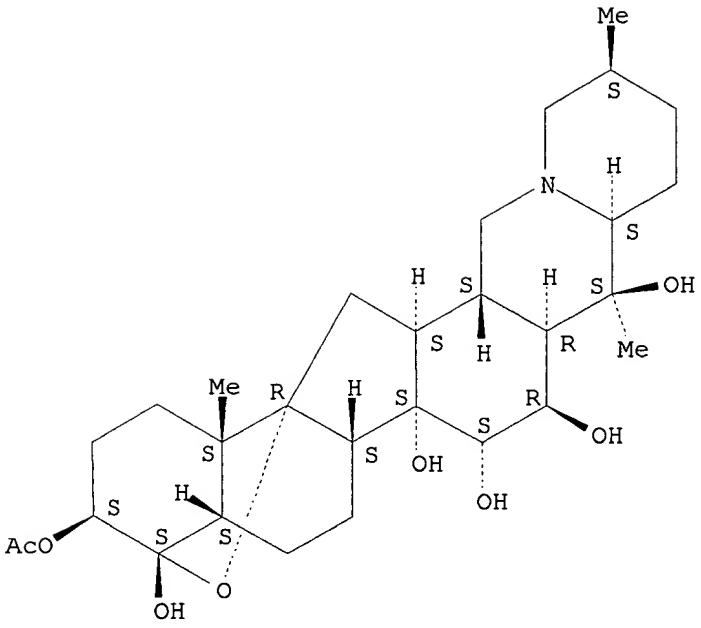
ALL ANSWERS HAVE BEEN SCANNED

=> s zygacine/cn
L5 1 ZYGACINE/CN

=> d scan

L5 1 ANSWERS REGISTRY COPYRIGHT 2002 ACS
IN Cevane-3,4,14,15,16,20-hexol, 4,9-epoxy-, 3-acetate, (3.beta.,4.alpha.,15.alpha.,16.beta.)- (9CI)
MF C29 H45 N O8

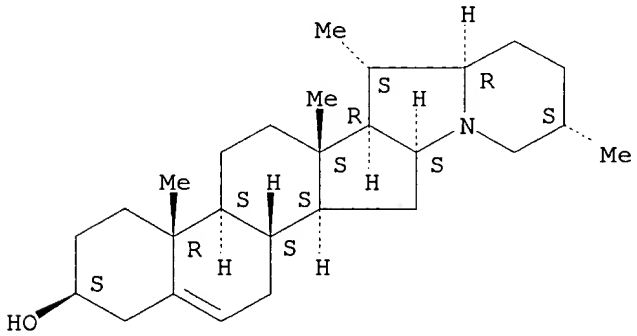
Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

ALL ANSWERS HAVE BEEN SCANNED

```
=> s solanidine/cn
L6            1 SOLANIDINE/CN

=> d scan

L6   1 ANSWERS   REGISTRY  COPYRIGHT 2002 ACS
IN   Solanid-5-en-3-ol, (3.beta.)- (9CI)
MF   C27 H43 N O
CI   COM

Absolute stereochemistry.
```



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

ALL ANSWERS HAVE BEEN SCANNED

=> s solanine/cn
L7 1 SOLANINE/CN

=> d scan

L7 1 ANSWERS REGISTRY COPYRIGHT 2002 ACS
IN **Solanine (9CI)**
MF Unspecified
CI COM, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

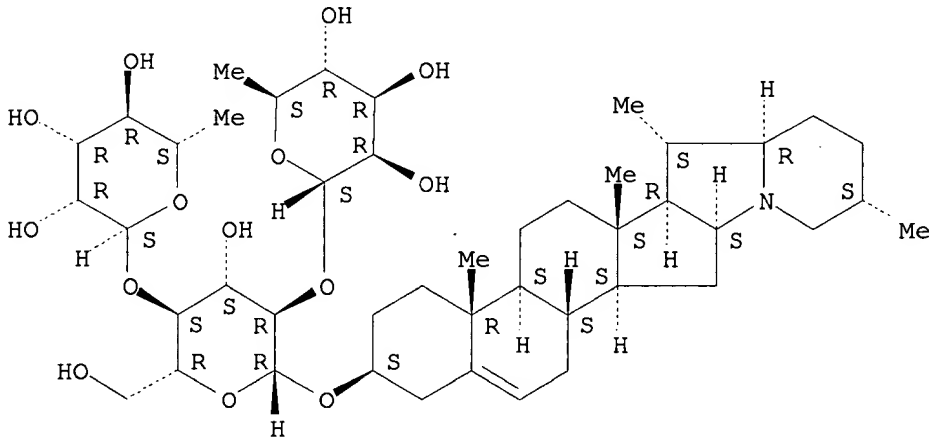
ALL ANSWERS HAVE BEEN SCANNED

=> s chaconine/cn
L8 1 CHACONINE/CN

=> d scan

L8 1 ANSWERS REGISTRY COPYRIGHT 2002 ACS
IN .beta.-D-Glucopyranoside, (3.beta.)-solanid-5-en-3-yl O-6-deoxy-.alpha.-L-mannopyranosyl-(1.fwdarw.2)-O-[6-deoxy-.alpha.-L-mannopyranosyl-(1.fwdarw.4)]- (9CI)
MF C45 H73 N O14
CI COM

Absolute stereochemistry.



ALL ANSWERS HAVE BEEN SCANNED